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MEDICAL LIBRARY



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ANNOUNCEMENT
OF THE
MEDICAL SCHOOL
(LONGWOOD AVENUE, BOSTON, MASS.)
OF
HARVARD UNIVERSITY
FOR
1906-07
FIRST EDITION



CAMBRIDGE, MASS.
Published by the University
1906

1906.

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MEDICAL SCHOOL CALENDAR.

1906.

- Sept. 20, Thursday.* Examinations begin for applicants for advanced standing, and for men previously conditioned.
- Sept. 26, Wednesday.* Examination in Chemistry for admission.
- Sept. 27, Thursday.* **Academic Year begins.** Registration of Students.
- Oct. 1, Monday.* Last day for receiving applications for the Bullard Fellowships.
- Nov. 1, Thursday.* Last day for receiving essays for the William H. Thorndike Prize.
- Nov. 29, Thursday.* Thanksgiving Day: a holiday.
- Nov. 30, Friday.* Last day for receiving applications for the Cheever and Hayden Scholarships.

RECESS FROM DEC. 23, 1906, TO JAN. 2, 1907, INCLUSIVE.

1907.

- Jan. 1, Tuesday.* Last day for receiving dissertations for the Boylston Medical Prizes.
- Jan. 15, Tuesday.* Last day for receiving applications from students in the Professional Schools to be qualified for the degree of A.M. in 1907.
- Jan. 30, Wednesday.* Mid-year Examinations begin.
- Feb. 1, Friday.* **Second half-year begins.**
- Feb. 22, Friday.* Washington's Birthday: a holiday.
- April 1, Monday.* Last day for receiving dissertations for the Bowdoin Prizes.

RECESS FROM APRIL 14 TO APRIL 20, INCLUSIVE.

- May 1, Wednesday.* Last day for receiving dissertations for the Dante, Toppan, and Sumner Prizes.

- May 1, Wednesday.* Last day for receiving applications of candidates for the degree of M.D. in 1907.
- May 30, Thursday.* Memorial Day: a holiday.
- June 1, Saturday.* Last day for receiving applications for Scholarships for 1907-08 (except the Cheever and Hayden Scholarships).
- June 1, Saturday.* Examinations begin.
- June 26, Wednesday.* Commencement.

SUMMER VACATION OF THIRTEEN WEEKS, FROM COMMENCEMENT TO
SEPTEMBER 25, INCLUSIVE.

- June 27, Thursday.* Examination in Chemistry for admission.
- Sept. 19, Thursday.* Examinations begin for applicants for advanced standing, and for men previously conditioned.
- Sept. 25, Wednesday.* Examination in Chemistry for admission.
- Sept. 26, Thursday.* Academic Year begins. Registration of Students.
- Oct. 1, Tuesday.* Last day for receiving applications for the Bullard Fellowships.
- Nov. 1, Friday.* Last day for receiving essays for the William H. Thorndike Prize.
- Nov. 28, Thursday.* Thanksgiving Day: a holiday.
- Nov. 30, Saturday.* Last day for receiving applications for the Cheever and Hayden Scholarships.

THE MEDICAL SCHOOL.

FACULTY OF MEDICINE.*

CHARLES W. ELIOT, A.M., LL.D., PRESIDENT.

WILLIAM L. RICHARDSON, M.D., DEAN, and *Professor of Obstetrics.*

CLARENCE J. BLAKE, M.D., *Professor of Otology.*

J. COLLINS WARREN, M.D., LL.D., HON. F.R.C.S. (Eng.), *Moseley Professor of Surgery.*

REGINALD H. FITZ, M.D., LL.D., *Hersey Professor of the Theory and Practice of Physic.*

THOMAS DWIGHT, M.D., LL.D., *Parkman Professor of Anatomy.*

JOHN H. MCCOLLOM, M.D., *Assistant Professor of Contagious Diseases.*

JAMES J. PUTNAM, M.D., *Professor of Diseases of the Nervous System.*

ELBRIDGE G. CUTLER, M.D., *Instructor in the Theory and Practice of Physic.*

FREDERICK C. SHATTUCK, M.D., *Jackson Professor of Clinical Medicine.*

EDWARD H. BRADFORD, M.D., *Professor of Orthopedic Surgery.*

CHARLES A. BRACKETT, D.M.D., *Professor of Dental Pathology.*

THOMAS MORGAN ROTCH, M.D., *Professor of Pediatrics.*

EUGENE H. SMITH, D.M.D., *Professor of Mechanical Dentistry and Orthodontia, and Dean of the Dental School.*

WILLIAM F. WHITNEY, M.D., *John Barnard Swett Jackson Curator of the Warren Anatomical Museum.*

CHARLES S. MINOT, S.D., LL.D., D.Sc., *James Stillman Professor of Comparative Anatomy.*

MAURICE H. RICHARDSON, M.D., *Professor of Clinical Surgery.*

CHARLES M. GREEN, M.D., *Associate Professor of Obstetrics and Clinical Gynaecology, and Secretary of the Faculty of Medicine.*

EDWARD C. BRIGGS, M.D., D.M.D., *Professor of Dental Materia Medica and Therapeutics.*

HERBERT L. BURRELL, M.D., *Professor of Clinical Surgery.*

WILLIAM T. COUNCILMAN, M.D., *Shattuck Professor of Pathological Anatomy.*

MYLES STANDISH, M.D., *Assistant Professor of Ophthalmology.*

HAROLD C. ERNST, M.D., *Professor of Bacteriology.*

CHARLES HARRINGTON, M.D., *Professor of Hygiene.*

* Arranged, with the exception of the President and Dean, on the basis of collegiate seniority.

- WILLIAM H. POTTER, D.M.D., *Professor of Operative Dentistry.*
 HERMAN F. VICKERY, M.D., *Instructor in Clinical Medicine.*
 JOHN T. BOWEN, M.D., *Assistant Professor of Dermatology.*
 HENRY JACKSON, M.D., *Instructor in Clinical Medicine.*
 GEORGE G. SEARS, M.D., *Assistant Professor of Clinical Medicine.*
 ALGERNON COOLIDGE, JR., M.D., *Assistant Professor of Laryngology.*
 FRANZ PFAFF, M.D., *Professor of Pharmacology and Therapeutics.*
 THEOBALD SMITH, M.D., *George Fabyan Professor of Comparative Pathology.*
 WILLIAM T. PORTER, M.D., *Associate Professor of Physiology.*
 JAMES G. MUMFORD, M.D., *Instructor in Surgery.*
 FRANK B. MALLORY, M.D., *Associate Professor of Pathology.*
 EDWARD H. NICHOLS, M.D., *Assistant Professor of Surgical Pathology.*
 JOHN B. BLAKE, M.D., *Instructor in Surgery.*
 HOWARD A. LOTHROP, M.D., *Instructor in Surgery.*
 JOHN L. MORSE, M.D., *Assistant Professor of Pediatrics.*
 CHARLES A. PORTER, M.D., *Instructor in Surgery.*
 EDWARD W. TAYLOR, M.D., *Instructor in Neurology.*
 RICHARD C. CABOT, M.D., *Instructor in Clinical Medicine.*
 ELLIOTT P. JOSLIN, M.D., *Instructor in the Theory and Practice of Physic.*
 JAMES H. WRIGHT, M.D., S.D., *Instructor in Pathology.*
 CARL L. ALSBERG, M.D., *Instructor in Biological Chemistry.*
 JOHN L. BREMER, M.D., *Demonstrator of Histology.*
 WALTER B. CANNON, M.D., *Assistant Professor of Physiology.*
 JOHN WARREN, M.D., *Demonstrator of Anatomy.*
 FREDERIC T. LEWIS, M.D., *Assistant Professor of Embryology.*
 ELMER E. SOUTHARD, M.D., *Assistant Professor of Neuropathology.*

STANDING COMMITTEES FOR THE MEDICAL SCHOOL.

Course of Study. — Dr. Fitz (*Chairman*), and Drs. W. L. Richardson, Shattuck, Minot, Burrell, Porter, and Mallory.

Nominations. — Dr. Bradford, (*Chairman*), and Drs. Ernst, Harrington, Bowen, and Nichols.

Graduate and Summer Courses. — Dr. Mallory (*Chairman*), and Drs. Green, Cannon, Cabot, Joslin, Greenough, and J. Warren.

Admission. — Dr. W. L. Richardson (*Chairman*), and Drs. Green and Mallory.

Students' Health. — Dr. Ernst (*Chairman*), and Drs. Putnam, E. H. Smith, J. B. Blake, and Badger.

THE MEDICAL SCHOOL.

BOSTON.

GENERAL STATEMENT.

Three professorships of Medicine were established at the University in the years 1782 and 1783. The first degrees in Medicine were conferred in 1788. Before 1811, the degree conferred upon graduates of the School was that of BACHELOR OF MEDICINE; beginning with 1811, the degree has been DOCTOR OF MEDICINE. In 1810, the lectures given in Medicine were transferred from Cambridge to Boston, where the first MEDICAL COLLEGE was built in 1815.

The course of study required in this School for the degree of M.D. is of four years' duration. This requirement was established at the beginning of the year 1892-93.

The academic year begins on the Thursday following the last Wednesday in September, and ends on the last Wednesday in June. In order that the time of study shall count as a full year, students of all classes must present themselves on the first day of the school year and register their names with the Secretary.

There is a Christmas recess from December 23 to January 2 inclusive, and a recess of one week's duration in April.

Beginning with the year 1899-1900 a new arrangement of the subjects taught in the first two years was adopted. During the first half of the first year the students devote their time solely to Anatomy and Histology, and during the second half of the first year to Physiology and Biological Chemistry. They devote the first half of the second year to Pathology and Bacteriology, and the remainder of the second year to a variety of subjects which more particularly prepare the student for the clinical work of the third and fourth years.

Experience has shown that this logical arrangement of the subjects of the first two years enables a student to concentrate his energies to a much greater advantage than he can when his attention is divided among several subjects. Each correlated group presents sufficient variety to avoid monotony. Another advantage of this method is that it greatly increases the amount of time which can be devoted to each subject.

In 1902 certain other changes in the curriculum were adopted, to take effect with the class entering in the autumn of that year. The new course

of study is so arranged that the first three years are devoted to prescribed work, and the fourth year entirely to elective courses. A minimum of one thousand hours' work is required of each fourth year student; and courses are offered adapted to the student who wishes to fit himself to be a general practitioner, and also suitable courses for those who intend to become specialists or teachers in any department of medicine. The new elective curriculum of the fourth year began in the autumn of 1905.

A series of written, oral, and practical examinations on all the required subjects of medical instruction are distributed throughout the four years' course of study. Every candidate for the degree of Doctor of Medicine must pass these examinations in a satisfactory manner, and also fulfil all the other requirements enumerated on page 55.

The degree of Doctor of Medicine *cum laude* is given to candidates who obtain an average of 80 per cent. or over in all the required examinations.

Beginning in 1906, special students, not candidates for the degree of Doctor of Medicine, will be admitted, under certain conditions, to all courses in the School and to certain courses specially designed for them. For particulars, see page 66.

Pamphlets descriptive of the many courses of study for Graduates, and of the Summer Courses, may be obtained on application.

Inquiries may be addressed to the Dean of the Harvard Medical School, Longwood Avenue, Boston, Mass.

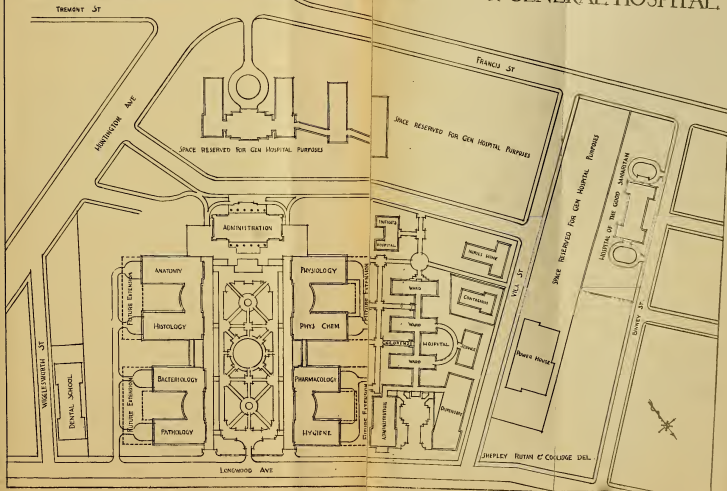
The New Buildings.

In September, 1906, the Medical School removed from its quarters on Boylston Street to commodious new buildings on Longwood Avenue, distant about a mile from the old building. At the new site the School possesses twenty-six acres of land. Eleven acres are now occupied by the Medical School buildings; the other fifteen are reserved for hospitals which, it is hoped, will be built on this ground in the near future.

The new buildings are five in number: one is designed for administrative and four for laboratory purposes. The administration building contains the necessary offices, several lecture rooms, and the Warren Anatomical Museum. The laboratory buildings provide extensive accommodations for various departments grouped in the buildings as follows:—(1) anatomy, comparative anatomy, histology, and embryology; (2) physiology, comparative physiology, and biological chemistry; (3) pathology, bacteriology, neuropathology, and surgical pathology; (4) hygiene, pharmacology, comparative pathology, and surgical research.

The laboratory buildings are all constructed on one general plan, — two parallel wings united by an amphitheatre. Above each amphitheatre is a large departmental library. The rooms in the various wings have been designed on a unit system, which will greatly simplify any changes re-

PLAN OF NEW BUILDINGS AND GROUNDS OF HARVARD MEDICAL SCHOOL ADJACENT HOSPITALS AND SITE RESERVED FOR GENERAL HOSPITAL.



quired by future growth or by uses other than those for which the rooms were originally designed. These buildings will provide an equipment for teaching and research in various branches of medical science which as a whole is probably unequalled.

For the construction and endowment of these new buildings the School is indebted to the generosity of Mrs. Collis P. Huntington, Messrs. J. Pierpont Morgan, John D. Rockefeller, David Sears, and a number of other benefactors.

ADMINISTRATIVE BOARD.

WILLIAM L. RICHARDSON, M.D., DEAN, and *Professor of Obstetrics*.
J. COLLINS WARREN, M.D., LL.D., Hon. F.R.C.S., *Professor of Surgery*.

FREDERICK C. SHATTUCK, M.D., *Professor of Clinical Medicine*.
WILLIAM F. WHITNEY, M.D., *Curator of the Anatomical Museum*.
CHARLES M. GREEN, M.D., SECRETARY, and *Associate Professor of Obstetrics and Clinical Gynaecology*.

CHARLES HARRINGTON, M.D., *Professor of Hygiene*.

FRANK B. MALLORY, M.D., *Associate Professor of Pathology*.

WALTER B. CANNON, M.D., *Assistant Professor of Physiology*.

JOHN WARREN, M.D., *Demonstrator of Anatomy*.

OFFICE HOURS OF THE DEAN, MONDAY AND THURSDAY, 4 TO 5 P.M.;
OF THE SECRETARY, WEDNESDAY AND FRIDAY, 5 TO 6 P.M.

STANDING COMMITTEES.

Building.—Dr. Whitney (*Chairman*), and Drs. W. L. Richardson and J. Warren.

Advertising and Catalogue.—Dr. Green (*Chairman*), and Drs. Mallory and Cannon.

Library.—Dr. Shattuck (*Chairman*), and Drs. Harrington and Cannon.
Warren Museum.—Dr. J. C. Warren (*Chairman*), and Drs. Whitney and Mallory.

Fellowships.—Dr. Shattuck (*Chairman*), and Drs. J. C. Warren, Whitney, Harrington, and Mallory.

Scholarships and Students' Aid.—Dr. W. L. Richardson (*Chairman*), and Drs. Green and Cannon.

INSTRUCTORS, LECTURERS, AND ASSISTANTS.*

EDWARD COWLES, M.D., LL.D., *Instructor in Mental Diseases*.

SAMUEL H. DURGIN, M.D., *Lecturer on Hygiene*.

GEORGE W. GAY, M.D., *Lecturer on Surgery*.

* Arranged on the basis of collegiate seniority.

- ABNER POST, M.D., *Instructor in Syphilis.*
GEORGE T. TUTTLE, M.D., *Clinical Instructor in Mental Diseases.*
SAMUEL J. MIXTER, M.D., *Lecturer on Surgery.*
GEORGE H. MONKS, M.D., M.R.C.S., *Lecturer on Surgery.*
FRANCIS S. WATSON, M.D., *Lecturer on Genito-Urinary Surgery.*
FRANCIS B. HARRINGTON, M.D., *Lecturer on Surgery.*
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ROBERT W. LOVETT, M.D., *Instructor in Orthopedics.*
WILLIAM NOYES, M.D., *Clinical Instructor in Mental Diseases.*
JOSEPH P. CLARK, M.D., *Assistant in Laryngology.*
ELLIOTT G. BRACKETT, M.D., *Instructor in Orthopedics.*
ARTHUR K. STONE, M.D., *Assistant in the Theory and Practice of Physic.*
FREDERIC C. COBB, M.D., *Instructor in Laryngology.*
EDWIN E. JACK, M.D., *Instructor in Ophthalmology.*
PAUL THORNDIKE, M.D., *Instructor in Genito-Urinary Surgery.*
GEORGE A. CRAIGIN, M.D., *Clinical Instructor in Pediatrics.*
JOEL E. GOLDTHWAIT, M.D., *Instructor in Orthopedics.*
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JOHN W. BARTOL, M.D., *Assistant in Clinical Medicine.*
WILLIAM E. FAULKNER, M.D., *Assistant in Surgery.*
ELISHA FLAGG, M.D., *Assistant in Anatomy.*
JAMES M. JACKSON, M.D., *Assistant in Clinical Medicine.*
ALEXANDER QUACKENBOSS, M.D., *Instructor in Ophthalmology.*
FRANKLIN G. BALCH, M.D., *Assistant in Surgery.*
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JOHN DANE, M.D., *Instructor in Orthopedics.*
FRED B. LUND, M.D., *Assistant in Surgery.*
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ROCKWELL A. COFFIN, M.D., *Assistant in Laryngology.*
JOSEPH L. GOODALE, M.D., *Assistant in Laryngology.*
JAMES S. STONE, M.D., *Assistant in Surgery.*
PHILIP HAMMOND, M.D., *Instructor in Otology.*
HENRY H. HASKELL, M.D., *Assistant in Ophthalmology.*
HENRY F. HEWES, M.D., *Instructor in the Clinical Laboratory.*
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FRANKLIN W. WHITE, M.D., *Assistant in the Theory and Practice of Physic.*

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WILLIAM H. ROBEY, JR., M.D., *Assistant in Clinical Medicine.*
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EDMUND W. CLAP, M.D., *Assistant in Ophthalmology.*
ROBERT B. GREENOUGH, M.D., *Instructor in Surgery.*
DANIEL F. JONES, M.D., *Assistant in Surgery.*
HARRIS P. MOSHER, M.D., *Assistant in Anatomy, and in Laryngology.*
FRANKLIN S. NEWELL, M.D., *Instructor in Obstetrics and Gynecology.*
HENRY J. PERRY, M.D., *Assistant in Bacteriology.*
WILLIAM H. SMITH, M.D., *Assistant in Clinical Medicine.*
ARTHUR M. WORTHINGTON, M.D., *Assistant in Bacteriology.*
ERNEST B. YOUNG, M.D., *Assistant in Gynaecology.*
CHARLES S. BUTLER, M.D., *Assistant in Anatomy.*
WALTER A. LECOMPTE, M.D., *Assistant in Otology.*
HENRY O. MARCY, JR., M.D., *Assistant in Anatomy.*
FRED M. SPALDING, M.D., *Assistant in Ophthalmology.*
HOWARD T. SWAIN, M.D., *Assistant in Obstetrics.*
FREDERICK S. BURNS, M.D., *Assistant in Dermatology.*
LE ROI G. CRANDON, M.D., *Assistant in Surgery.*
LINCOLN DAVIS, M.D., *Instructor in Anatomy.*
EUGENE E. EVERETT, M.D., *Assistant in Bacteriology.*
MAYNARD LADD, M.D., *Instructor in Pediatrics.*
GEORGE B. MAGRATH, M.D., *Assistant in Hygiene.*
JOSEPH H. PRATT, M.D., *Assistant in the Theory and Practice of Physic.*
HENRY A. CHRISTIAN, M.D., *Instructor in the Theory and Practice of Physic.*
LEO V. FRIEDMAN, M.D., *Assistant in Obstetrics.*
CHANNING C. SIMMONS, M.D., *Assistant in Surgery.*
ROBERT J. TERRY, M.D., *Teaching Fellow in Histology.*
WILDER TILESTON, M.D., *Assistant in Clinical Medicine.*
JAMES R. TORBERT, M.D., *Assistant in Obstetrics.*
GEORGE A. WATERMAN, M.D., *Assistant in Neurology.*
CHARLES H. DUNN, M.D., *Assistant in Pediatrics.*
EDWIN A. LOCKE, M.D., *Assistant in Clinical Medicine.*
LUTHER D. SHEPARD, M.D., D.M.D., *Instructor in Histology.*
MAURICE V. TYRODE, M.D., *Instructor in Pharmacology.*

- RICHARD G. WADSWORTH, M.D., *Assistant in Anatomy.*
HORACE BINNEY, M.D., *Assistant in Anatomy.*
DAVID CHEEVER, M.D., *Assistant in Anatomy.*
FREDERICK T. LORD, M.D., *Assistant in Clinical Medicine.*
ERNEST G. MARTIN, Ph.D., *Instructor in Physiology.*
DAVID D. SCANNELL, M.D., *Assistant in Anatomy.*
ERNEST E. TYZZER, M.D., *Assistant in Pathology.*
JOHN AUER, M.D., *Instructor in Physiology.*
GEORGE L. BAKER, M.D., *Assistant in Bacteriology.*
LAWRENCE J. HENDERSON, M.D., *Instructor in Biological Chemistry.*
FRANCIS W. PALFREY, M.D., *Assistant in Bacteriology.*
SAMUEL ROBINSON, M.D., *Assistant in Anatomy.*
S. BURT WOLBACH, M.D., *Instructor in Pathology.*
FRANCIS H. McCRUDDEN, S.B., *Assistant in Biological Chemistry.*
ALEXANDER R. ROBERTSON, M.D., C.M., *Assistant in Pathology.*
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AUSTIN TEACHING FELLOWS.

- LANGDON FROTHINGHAM, M.D.V., *in Bacteriology.*
FRANK L. RICHARDSON, M.D., *in Surgery.*
PAUL A. LEWIS, M.D., *in Comparative Pathology.*
FRED W. THYNG, Ph.D., *in Histology and Embryology.*

THE MEDICAL SCHOOL.

ADMISSION OF STUDENTS.

Candidates for admission to this School must present a degree in Arts, Literature, Philosophy, or Science from a recognized college or scientific school, with the exception of such persons, of suitable age and attainments, as may be admitted by a special vote of the Administrative Board in each case.*

All candidates, whether presenting a degree or not, are required to satisfy the Faculty that they have had a course in Theoretical and Descriptive (Inorganic) Chemistry and Qualitative Analysis sufficient to fit them to pursue the courses in Chemistry given at the Medical School; or, failing in this, to pass an examination in General Chemistry and Qualitative Analysis. Students who are unable to fulfil either of these requirements may enter conditioned in Chemistry; but must make up the condition before the beginning of the second half-year.

The admission examination in General Chemistry (at which time also the note-books in Qualitative Analysis must be handed in) is held at the Medical School, Longwood Avenue, Boston, at 12 o'clock noon on the Thursday following the last Wednesday in June, and on the last Wednesday in September. The examination is conducted in writing. Specimen examination papers may be found in the Medical School Catalogues.

In and after September, 1907, a knowledge of elementary Organic Chemistry will be required for admission.

Applicants for admission to the Medical School who have studied three years in recognized colleges, technical, or scientific schools, in which courses in Human Anatomy, Physiology, Histology, and Biological Chemistry are a part of the instruction, may be admitted to advanced standing, provided they pass an examination in these subjects and possess the other requirements for admission.

A graduate of another medical school of recognized standing may obtain the degree of M.D. at this University, after a year's study in the undergraduate course, by passing all examinations required in the full undergraduate course and by fulfilling all requirements for admission.

* The exception above referred to applies only to men who, without such a degree, have acquired an equivalent education and training sufficient to enable them to profit by the instruction offered in the School.

These examinations may be taken only at the times set for the regular examinations in September, February (mid-year examinations), and June. The next year will begin September 27, 1906.

DIVISION OF STUDENTS.

Students are divided into four classes according to their time of study and proficiency. No student may advance with his class, or be admitted to advanced standing, until he has passed the required examinations in the studies of the previous year, or a majority of them; nor may he become a member of the third class, until he has passed all the examinations of the first, and in addition a majority of those of the second year; nor of the fourth class, until he has passed all the examinations of the first and second years, in addition to a majority of those of the third year.

No student will be permitted to continue his membership in the School, if at the beginning of his second year he has passed none of the first-year examinations.

In order that the time of study shall count as a full year, students of all classes must register on Thursday, the first day of the academic year.

*Beginning with the academic year 1906-07 students will be required to devote themselves exclusively to the work of the School.**

Students who began their professional studies in other recognized Medical Schools may be admitted to advanced standing. All persons who apply for admission to the advanced classes must furnish a satisfactory certificate of time spent in medical studies, must pass examinations in the branches already pursued by the class to which they seek admission, and fulfil all other requirements for admission; but any student who has fulfilled the requirements of a Department of this School in another school of recognized standing may be excused from repeating such requirements provided the instruction which he has received is considered satisfactory by the head of the Department in this School.

Any student may obtain a certificate of his period of connection with the School.

* The intent of this rule is that students may not engage in hospital work during term time, except in so far as required by the School curriculum.

DIVISION OF STUDIES

DIVISION OF STUDIES.

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FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR ELECTIVES	
*Anatomy 3	*Bacteriology 1	*Maternal Medicine and Therapeutics 2	Anatomy	Surgery
*Histology and Embryology 3	*Pathology 3	*Theory and Practice 3	Comparative Anatomy	Genito-Urinary Surgery
Physiology 3	Hygiene 1	Clinical Medicine 3	Embryology	Orthopedics
Biochemistry 3	<i>Maternal Medicine and Therapeutics</i>	Pediatrics 2	Histology	Surgical Pathology
	<i>Theory and Practice</i>	*Surgery (written 2 hrs., practical 1 hr.) 3	Physiology	Obstetrics
	<i>Clinical Medicine</i>	Clinical Surgery (written 1 hr., practical 1 hr.) 2	Comparative Physiology	Gynecology
	<i>Surgery</i>	Obstetrics 3	Biochemistry	Dermatology and Syphilis
		Gynecology 1	Bacteriology	Neurology and Psychiatry
		Dermatology 1	Pathology	Ophthalmology
		Syphilis 1	Neuropathology	Otology
		Neurology 1	Hygiene	Laryngology
		Psychiatry 1	Clinical Medicine	
		*Ophthalmology 1	Theory and Practice	
		Otology 1	Clinical Pathology	
		Laryngology 1	Pediatrics	
		<i>Genito-Urinary Surgery</i>	Clinical Surgical Pathology	
		<i>Legal Medicine</i>		
		<i>Municipal Sanitation</i>		

NOTE. — Subjects in which an examination is required are in roman letters. The number following the name of the examination indicates the length in hours of the examination. In the fourth year, electives must be chosen aggregating 1000 hours; each elective or half course has a value of 125 hours.

* Examination in February.

METHODS OF INSTRUCTION.

During the first three years the following methods of instruction are adopted in the several departments:—

NOTE.—The figures at the right of the page indicate as accurately as can be ascertained the number of hours of instruction which each student receives in the different courses.

ABBREVIATIONS USED IN THE FOLLOWING PAGES, AND IN THE
TABULAR VIEWS.

B.C.H.	= Boston City Hospital.
B.D.	= Boston Dispensary.
B.I.H.	= Boston Insane Hospital (Pierce and Austin Farms).
B.L.H.	= Boston Lying-in Hospital.
Ch.H.	= Children's Hospital.
E. and E.I.	= Massachusetts Charitable Eye and Ear Infirmary.
H.M.S.	= Harvard Medical School.
I.H.	= Infants' Hospital.
L.I.H.	= Long Island Hospital.
McL.H.	= McLean Hospital.
M.G.H.	= Massachusetts General Hospital.
S.D.B.C.H.	= South Department, Boston City Hospital.
S.H.	= Samaritan Hospital.
S.O.P.D.	= Surgical Out-Patient Department.

Anatomy.

THOMAS DWIGHT, M.D., LL.D.,	<i>Parkman Professor of Anatomy.</i>
JOHN WARREN, M.D.,	<i>Demonstrator of Anatomy.</i>
LINCOLN DAVIS, M.D.,	<i>Instructor in Anatomy.</i>
ELISHA FLAGG, M.D.,	<i>Assistant in Anatomy.</i>
HARRIS P. MOSHER, M.D.,	<i>Assistant in Anatomy.</i>
CHARLES S. BUTLER, M.D.,	<i>Assistant in Anatomy.</i>
HENRY O. MARCY, Jr., M.D.,	<i>Assistant in Anatomy.</i>
RICHARD G. WADSWORTH, M.D.,	<i>Assistant in Anatomy.</i>
HORACE BINNEY, M.D.,	<i>Assistant in Anatomy.</i>
DAVID CHEEVER, M.D.,	<i>Assistant in Anatomy.</i>
DAVID D. SCANNELL, M.D.,	<i>Assistant in Anatomy.</i>
SAMUEL ROBINSON, M.D.,	<i>Assistant in Anatomy.</i>

First year.—The instruction consists of lectures; various practical exercises, including abundant dissection under the direction of the

Demonstrator; recitations; demonstrations; and study of frozen sections and of the living model. The means and methods of illustrating the anatomical lectures probably are unrivalled in this country. The system of demonstrations to small sections has been greatly extended.

Text-books.—Cunningham. Gray. Quain. Morris. Gerrish. Woolsey, Applied Anatomy.

Collateral Reading.—Dwight, Frozen Sections of a Child. Cunningham, Manual of Practical Anatomy. Macalister, Human Anatomy. Testut, Anatomie Humaine. Poirier, Traité d'Anatomie Humaine. Tillaux, Anatomie topographique. Humphry, Human Skeleton.

FIRST YEAR.

October.

Lectures. Professor DWIGHT. <i>Seven hours weekly.</i>	28
Demonstrations and study of bones and joints. <i>Three hours daily.</i>	60

November and December.

Lectures. Professor DWIGHT. <i>Three hours a week.</i>	24
Demonstrations. Dr. WARREN. <i>Four times a week to sections of the class.</i>	32
Practical anatomy with demonstrations. <i>Three hours a day, five times a week.</i>	120

January.

Lectures and demonstrations. Professor DWIGHT. <i>Daily.</i>	24
Demonstrations. Dr. WARREN. <i>Four times a week to sections of the class.</i>	16
Practical anatomy with recitations. <i>Three hours a day, five times a week.</i>	60
Demonstrations and study of the brain and organs of sense. <i>Three hours a day, five times a week.</i>	60

Comparative Anatomy.

CHARLES S. MINOT, S.D., LL.D., D.Sc., *James Stillman Professor of Comparative Anatomy.*

FREDERIC T. LEWIS, M.D., *Assistant Professor of Embryology.*

JOHN L. BREMER, M.D., *Demonstrator of Histology.*

ROBERT J. TERRY, M.D., *Teaching Fellow in Histology.*

LUTHER D. SHEPARD, M.D., D.M.D., *Instructor in Histology.*

FRED W. THYNG, Ph.D., *Austin Teaching Fellow in Histology and Embryology.*

LABORATORY.

The laboratory comprises the whole southeast wing of the new Morgan Anatomical Building. There are fifteen unit rooms for class work, each of which measures twenty-three by thirty feet, is well lighted, and will be thoroughly equipped as needed. Each unit room is designed for twenty-four elementary or twelve advanced students. There are separate rooms for the various officers, store rooms, collection room, animal room, etc. There is a large library in which complete files of the most important anatomical and morphological journals will be placed, together with many standard works of reference, and in an adjoining room a collection of about seven thousand pamphlets. A card catalogue and a classified bibliography are maintained which give ready access to the literature.

The laboratory offers exceptional facilities for all kinds of work in comparative anatomy in the broadest sense, including histology and embryology. The former Department of Histology and Embryology has been merged with the new Department of Comparative Anatomy.

The Embryological Collection is a unique feature of the laboratory. It comprises over eleven hundred series of sections of carefully selected typical vertebrate embryos, and affords therefore opportunities for research in comparative embryology such as cannot be found elsewhere. The collection also includes fifty-one series of sections from human embryos, several of which are of exceptional value, among them being one of the very youngest stages of man yet known.

Text-books.—Böhm and von Davidoff, A Text-Book of Histology. Minot, Text-book of Embryology.

Collateral Reading.—Quain, Anatomy. Lee, Microtomist's Vademecum. Kölliker, Gewebelehre. Minot, Human Embryology. Van Gehuchten, Système nerveux.

REGULAR COURSES.

First year.—Histology and Embryology are taught by lectures and laboratory work; twenty-two hours a week are required during October, November, and December. Every student is recommended to purchase a microscope, but microscopes may be rented, by those who do not possess them, for three dollars a term. Each student is charged a laboratory fee of three dollars.

FIRST YEAR.

October, November, December.

Lectures. Professor MINOT, Dr. BREMER, Dr. LEWIS. *One half-hour five times a week.*

Laboratory work. <i>Three and one-half hours five times a week.</i>	210
Quiz. <i>Two hours once a week.</i>	24

GRADUATE COURSES.

I. *Comparative Anatomy.* The fourth-year electives are open to graduates. These are three half-courses, mornings or afternoons, December-January; February-March; April-May.

II. *Embryology.* Two half-courses, afternoons, February-March; April-May.

III. *Histology.* Half-course, afternoons, April-May.

IV. Professor MINOT with Dr. LEWIS will give a course of thirty-two exercises on Elementary Human Embryology for practitioners. This course can be extended by a supplementary course of the same length. Fee, \$25.

Graduates taking these courses will be allowed the privilege of the Histological Laboratory. There will be an additional charge of \$5 for reagents and material.

V. Professor MINOT with Drs. BREMER, LEWIS, and SHEPARD will give a course intended for persons who wish to make a special study of Vertebrate or Human Embryology. This course is open to registered students of the Graduate Department of the Faculty of Arts and Sciences, and will be offered hereafter also as a special course to graduate students of the Medical School.

This course will extend through the entire year, but in two parts of one term each. The resources of the Embryological Laboratory in apparatus and material render it possible to offer unusually favorable opportunities for both general study and special research. The course is arranged for those who, as morphologists, anatomists, and practitioners, wish to give the principal part of their time for one or more school terms to the subject. It will cover the whole field of Embryology, including the genital products, the theories of heredity and sex, the formation of the germ-layers, differentiation of the organs, the history of the placenta and the general morphology of Vertebrates or of Man. Most of the work will be done by the student in the laboratory, but there will also be formal lectures. Students taking this course will be expected to devote to it not less than eighteen hours a week.

Fee, for one term, \$75. Two terms, \$125.

The above courses will be limited to twelve students in each course.

INVESTIGATION.

Special accommodations are furnished in the laboratory for students who wish to pursue special or advanced work. Special facilities are offered to original investigators, who will receive such personal aid as may be necessary or advantageous.

A special course in vertebrate embryology is given during the second term; this has been accepted by the Faculty of Arts and Sciences, and is open to students of the academic departments.

Physiology.

WALTER B. CANNON, M.D., *Assistant Professor of Physiology.*

ERNEST G. MARTIN, Ph.D., *Instructor in Physiology.*

JOHN AUER, M.D., *Instructor in Physiology.*

First Year. — The method of teaching Physiology consists in placing before the student the classical experiments of the science grouped in the most instructive sequence. The student himself performs as many of these as his own skill and the length of the course permit. What he does he is required to do well. The experiments selected are those which best illustrate the several groups or chapters of which physiology is composed. Preference, where possible, is given to observations used in clinical medicine. The observations which he cannot himself make the student reads with an understanding grounded on his own practical experience. The facts thus gained are discussed in conferences, written tests, formal lectures, and recitations.

In the laboratory the student works about one hundred and seventy-four hours. Each student is required to preserve in a laboratory book the graphic records obtained in his experiments, together with a brief account of his own observations. These records are examined weekly. The character of the laboratory instruction may be seen from the questions asked in the practical examination, page 91.

The conferences, about fifty informal half-hour exercises, are devoted to questions and explanations concerning the experimental work; they are, in fact, a combination of recitation and lecture.

The written tests are fifteen-minute examinations held daily except Mondays and Saturdays and one-hour examinations held Mondays during fifteen weeks. The following are some of the questions: State experiments to show where stimulation begins on closure of the galvanic current. What is the reaction of degeneration? Mark on the intra-ventricular pressure curve the moment of opening and closure of the mitral and aortic valves. Give a brief account of the digestion of fat. Give evidence to show that afferent impulses are transmitted by the

posterior roots of spinal nerves. Prove the existence of "hot and cold spots" on the skin. Cite experiments to show that the crystalline lens changes its shape in accommodation.

Approximately ninety formal lectures are held. These are supplemented by the reading and discussion of student theses.

One recitation is given weekly during fifteen weeks.

Twenty-four special demonstrations are given. The motor areas of the cortex of the brain, and the action of the chorda tympani nerve on the secretion of saliva are examples of the subjects chosen for demonstration.

Each student is required to write a physiological thesis, the material for which must be taken directly from the report of the original investigations. In addition each student is required to prepare a bibliography of a subject in physiology. About forty-five of the theses are selected for discussion by the class and staff. The subjects chosen are as a rule such as will supplement the instruction given in other ways. The discussions are held about five times a week from the sixth to the fifteenth week inclusive. The discussion is opened by three students, each of whom has prepared himself upon some of the original investigations included in the theses, and is continued by the members of the class and of the staff. Among the theses discussed in the last collegiate year were: The excretion of urea; Internal secretion of the pancreas; Oedema; Regeneration of blood after hemorrhage; Artificial parthenogenesis; and Aphasia.

Text-books. — Text-book of Physiology, edited by E. A. Schäfer. Foster, Text-book of Physiology. American Text-book of Physiology. Howell, Text-book of Physiology. Waller, Human Physiology. Hermann, Lehrbuch der Physiologie. Porter, Introduction to Physiology.

FIRST YEAR (Second half).

Laboratory experiments. Assistant Professor CANNON, and Drs. MARTIN and AUER. <i>Daily, except Saturday.</i>	174
Conferences (52). Assistant Professor CANNON.	26
Written tests (76). <i>Fifteen minutes daily, except Monday and Saturday.</i>	25
Written tests (15). <i>One hour Mondays.</i>	15
Lectures (86). Assistant Professor CANNON and Dr. MARTIN.	43
Special demonstrations (23). Assistant Professor CANNON and Drs. MARTIN and AUER.	15
Recitations (15). Assistant Professor CANNON and Dr. MARTIN. <i>Saturday days. First to fifteenth week, inclusive.</i>	15
Discussion of Theses (43).	33
Thesis. Written by each student from the original sources.	
Reading of investigations. The reading of investigations and the discussion of these at the appropriate conference.	

INVESTIGATION.

Any student, properly qualified, who desires to engage in physiological research will be welcomed into the laboratory and will be offered every facility for research which the laboratory affords.

Comparative Physiology.

WILLIAM T. PORTER, M.D., *Associate Professor of Physiology.*

GRADUATE COURSES.

I. *Physiological Research.* Students qualified for research will pursue their investigations under the immediate direction of Professor W. T. PORTER.

II. *Comparative Physiology of Muscle.* Professor PORTER. Three hours weekly during February and March.

III. *Physiological Conference.* Professor PORTER. Demonstrations with informal discussions of selected problems in physiology. Mondays, 5 to 6 P.M., November, December, and January.

Biological Chemistry.

CARL L. ALSBERG, M.D., *Instructor in Biological Chemistry.*

LAWRENCE J. HENDERSON, M.D., *Instructor in Biological Chemistry.*

OTIS F. BLACK, A.B., *Assistant in Biological Chemistry.*

FRANCIS H. MCCRUDDEN, S.B., *Assistant in Biological Chemistry.*

FIRST YEAR.

Biochemistry I. — The lectures in this course consist of a brief discussion of the theories of chemical constitution and a survey of those classes of chemical substances which are to be found in animals and plants, by Dr. HENDERSON; and of the general principles and more important facts of Chemical Physiology and Pathology, by Dr. ALSBERG.

The laboratory practice is designed to acquaint the student with some of the more important constituents of living matter and their chemical behavior, and with some of the routine methods of Biochemical investigation.

Conferences and discussions of selected topics supplement the main work of the course.

Chemistry 15, offered by the Division of Chemistry of the Faculty of Arts and Sciences, in some respects a parallel course, or its equivalent, together with a somewhat extended acquaintance with organic chemistry, may be accepted in place of a part of the work of this course, provided that the time be spent in more advanced work in Biological Chemistry.

FIRST YEAR.

Biochemistry 1. — General Biological Chemistry. Lectures, Monday, Tuesday, Wednesday, Thursday, Friday, at 2; and laboratory, Monday, Tuesday, Wednesday, Thursday, Friday, 3–5.30, during the second half-year. Drs. ALSBERG and HENDERSON, and Messrs. BLACK and McCRUDDEN.

GRADUATE COURSES.

Biochemistry 2. — Metabolism. Lectures, five times a week during November and December. Dr. ALSBERG.

This course is designed to acquaint the student with the present knowledge and problems of the metabolism of man and lower animals, both normal and pathological.

Biochemistry 3. — The Technique of Metabolism Investigations. Laboratory practice. Dr. ALSBERG and Mr. McCRUDDEN.

This course is designed to give the student a practical knowledge of the quantitative methods useful in conducting metabolism researches.

Biochemistry 4. — The Applications of Physical Chemistry to Biology. Lectures, five times a week during January. Dr. HENDERSON.

This course is designed to acquaint the student with the recent applications of physico-chemical theories and methods to Biology and medical science. The subjects to be discussed will include the theory of solution, the concentration law, catalysis, ionization, the theory of colloids, and the physico-chemical organization of the cell. The lectures will be supplemented by extended reading, and opportunity for practice in physico-chemical methods will be offered. In preparation for this course an elementary acquaintance with Physical Chemistry, such as may be obtained from Chemistry 8, offered by the Division of Chemistry of the Faculty of Arts and Sciences, is desirable.

Bacteriology.

HAROLD C. ERNST, M.D., *Professor of Bacteriology.*

CALVIN G. PAGE, M.D., *Assistant in Bacteriology.*

HENRY J. PERRY, M.D., *Assistant in Bacteriology.*

ARTHUR M. WORTHINGTON, M.D., *Assistant in Bacteriology.*

EUGENE E. EVERETT, M.D., *Assistant in Bacteriology.*

FRANCIS W. PALFREY, M.D., *Assistant in Bacteriology.*

GEORGE L. BAKER, M.D., *Assistant in Bacteriology.*

LANGDON FROTHINGHAM, M.D.V., *Austin Teaching Fellow in Bacteriology.*

Second year. — Required bacteriology is taught by lectures and practical laboratory work. The lectures treat of the general subject and of methods

of practical work. In the laboratory each student has an opportunity to become familiar with the simpler methods of manipulation and staining which are of especial clinical value, and with the more prominent of the pathogenic bacteria.

Text-books.—Muir and Ritchie. Abbott. Park.

Collateral Reading.—Sternberg. Heim. Migula.

SECOND YEAR.

Lectures. Professor ERNST. *Daily, except Saturdays, during October and November.* 40

Laboratory work. Professor ERNST, and Drs. PAGE, PERRY, WORTHINGTON, EVERETT, PALFREY, BAKER, and FROTHINGHAM. *Two to three hours daily during October and November.* 120

Pathology.

WILLIAM T. COUNCILMAN, M.D., *Shattuck Professor of Pathological Anatomy.*

FRANK B. MALLORY, M.D., *Associate Professor of Pathology.*

ELMER E. SOUTHARD, M.D., *Assistant Professor of Neuropathology.*

JAMES H. WRIGHT, M.D., S.D., *Instructor in Pathology.*

S. BURT WOLBACH, M.D., *Instructor in Pathology.*

ERNEST E. TYZZER, M.D., *Assistant in Pathology.*

ALEXANDER R. ROBERTSON, M.D., C.M., *Assistant in Pathology.*

— — —, M.D., *Assistant in Pathology.*

— — —, M.D., *Assistant in Neuropathology.*

Second year.—The course in Pathology consists of laboratory work, demonstrations, conferences, and lectures. During the forenoons of October and November a course in general pathology is given. The basis of the work is formed by a laboratory course in which microscopic work is combined with demonstrations and examinations of gross specimens. A lecture with stereopticon demonstrations is given daily at the end of the exercises in order to explain more fully the lesions studied in the laboratory.

During the forenoons of December and of the first and second weeks of January the work consists chiefly of the study and diagnosis of tissues from post-mortem examinations. So far as possible all the organs from a cadaver are demonstrated together, and the relation of the lesions explained. The organs are examined by the naked eye, and microscopically in frozen sections. Tumors and other pathological products are examined in the same way. Lectures and laboratory talks are given daily.

In the forenoons of the second and third weeks of December, Professor T. SMITH gives a course of lectures and laboratory exercises on animal parasites, particularly the protozoa and the infections produced by them.

During the afternoons of December and January two courses are given in the special pathology of neurology and surgery; the courses constitute a valuable introduction to the clinical work required in these subjects in the third year.

These courses are:—

- (a) Fifteen demonstrations and laboratory exercises on the pathology of the nervous system. (See Neurology.)
- (b) Twenty laboratory exercises in surgical pathology. (See Surgery.)

Text-books.—Ziegler, General and Special Pathology. Stengel, A Text-book of Pathology. Mallory and Wright, Pathological Technique.

Collateral Reading.—Thoma, Pathologische Anatomie. Orth, Pathologische Anatomie; Diagnostik. Ribbert, Pathologische Histologie, Lehrbuch der Allgemeinen Pathologie. Lubarsch and Ostertag, Ergebnisse der Pathologie und Anatomie. Neveu-Lemaire, Parasitologie animale. Braun, The Animal Parasites of Man.

SECOND YEAR.

Lectures. Professor COUNCILMAN. *Daily for fourteen weeks, October, November, December (first week only), and January.* 84

Lectures. Professor T. SMITH. *One hour daily, second and third weeks of December.* 12

Laboratory work. Professor COUNCILMAN, and Drs. WOLBACH, ROBERTSON, and ———. *Three hours daily during the forenoons of October, November, December (first week only), and January.* 252

Demonstrations and laboratory work. Professor T. SMITH. *Two hours daily, second and third weeks of December.* 24

Neuropathology. Asst. Professor SOUTHARD. *Afternoons in December.* 45

Surgical pathology. Asst. Professor NICHOLS. *Afternoons in January.* 60

Comparative Pathology.

THEOBALD SMITH, M.D., *George Fabyan Professor of Comparative Pathology.*

PAUL A. LEWIS, M.D., *Austin Teaching Fellow in Comparative Pathology.*

Second year.—A short course on the pathogenic protozoa and higher animal parasites is given in January as a part of the course in Pathology (see above).

Fourth year.—A course consisting of lectures and demonstrations on the comparative etiology of infectious diseases is given during the year as a part of the fourth-year elective in Clinical Medicine. In this course much time is devoted to a consideration of the general principles underlying infection and immunity, and their application to diagnosis, prevention,

and therapy (vaccines, antitoxins, agglutinins, etc.). The public-health problems arising from the interrelation of human and animal diseases are also discussed.

A few graduate students qualified to carry on investigations may be accommodated at the laboratory at Forest Hills from October to June.

SECOND YEAR.

Lectures. Professor T. SMITH. (H.M.S.) *One hour daily, second and third weeks of December.* 12

Demonstrations and laboratory work. Professor T. SMITH, and Drs. WOLBACH, ROBERTSON, and LEWIS. *Two hours daily, second and third weeks of December.* 24

Hygiene.

CHARLES HARRINGTON, M.D., *Professor of Hygiene.*

GEORGE B. MAGRATH, M.D., *Assistant in Hygiene.*

Second year. — The instruction consists of lectures and demonstrations.

Text-book. — Harrington, Practical Hygiene.

Collateral Reading. — Notter, Hygiene. Manson, Tropical Diseases. Newsholme, Vital Statistics. Mason, Water Supply. Abbott, Hygiene of Transmissible Diseases.

SECOND YEAR.

Lectures and demonstrations. Professor HARRINGTON. *Three times a week, second half-year.* 48

Materia Medica and Therapeutics.

FRANZ PFAFF, M.D., *Professor of Pharmacology and Therapeutics.*

MAURICE V. TYRODE, M.D., *Instructor in Pharmacology.*

— — —, M.D., *Assistant in Materia Medica.*

Second and Third years. — Instruction is given by lectures and recitations, and by demonstrations of the physiological action of drugs. The lectures are supplemented by an optional course in practical pharmacy, in which the compounding of prescriptions is illustrated. In addition to the lectures on therapeutics, the practical relation of remedies to diseased conditions is dwelt on in the exercises in the departments of Theory and Practice, and of Clinical Medicine.

A special laboratory has been equipped for original research in Experimental Pharmacology and Therapeutics; here a voluntary course, open to a limited number of duly qualified undergraduates, affords opportunity for practical training and instruction in the methods and use of the special apparatus employed in determining the toxic and physiological actions of drugs, and their practical value as remedies.

Text-book. — A. R. Cushny, Pharmacology and Therapeutics.

Collateral Reading. — Schmiedeberg, *Arzneimittellehre*. Binz, *Vorlesungen ueber Pharmacologie*. H. C. Wood, *Therapeutics*. Brunton, *Pharmacology, Materia Medica, and Therapeutics*.

SECOND YEAR.

Pharmacology lectures.	Professor PFAFF.	<i>Twice a week, February to May inclusive.</i>	32
Materia Medica lectures.	Dr. TYRODE.	<i>Once a week, February to May inclusive.</i>	16
Voluntary laboratory work.	Dr. TYRODE.	<i>Two hours once a week during April and May.</i>	

THIRD YEAR.

Lectures on Therapeutics.	Professor PFAFF.	<i>Once a week, first half-year.</i>	16
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The Theory and Practice of Physic.

REGINALD H. FITZ, M.D.,	<i>Hersey Professor of the Theory and Practice of Physic.</i>
ELBRIDGE G. CUTLER, M.D.,	<i>Instructor in the Theory and Practice of Physic.</i>
ELLIOTT P. JOSLIN, M.D.,	<i>Instructor in the Theory and Practice of Physic.</i>
HENRY F. HEWES, M.D.,	<i>Instructor in the Clinical Laboratory.</i>
HENRY A. CHRISTIAN, M.D.,	<i>Instructor in the Theory and Practice of Physic.</i>
ARTHUR K. STONE, M.D.,	<i>Assistant in the Theory and Practice of Physic.</i>
FRANKLIN W. WHITE, M.D.,	<i>Assistant in the Theory and Practice of Physic.</i>
GEORGE S. C. BADGER, M.D.,	<i>Assistant in the Theory and Practice of Physic.</i>
JOSEPH H. PRATT, M.D.,	<i>Assistant in the Theory and Practice of Physic.</i>

Second and Third years. — Lectures. Lectures on selected topics are given at the Medical School.

Clinical Exercises. — Clinical exercises in which the students are called upon to take an active part are given at the Massachusetts General Hospital.

Ward Visits. — Students in sections will visit patients at stated intervals in the wards of the Massachusetts General Hospital.

Section Teaching.—Small sections of the class will be drilled in the larger hospitals and clinics in the taking of histories and in the examination of urine, blood, sputum, and gastric contents.

Laboratory of Clinical Pathology.—Students will be instructed and exercised in the chemical, microscopical, and bacteriological methods used in the practice of medicine. It is expected that each student by frequent opportunity will attain the necessary proficiency to enable him to utilize these methods in the diagnosis and prognosis of disease.

Text-books.—Osler, Practice of Medicine. Tyson, Practice of Medicine. Von Mering, Lehrbuch der Inneren Medizin. Sahli, Diagnostic Methods.

Collateral Reading.—Nothnagel, Encyclopedia of Practical Medicine. Allbutt, System of Medicine. Eulenberg, Lehrbuch der klinischen Untersuchungsmethoden. Kolle und Weintraud, Die Deutsche Klinik. Krehl, Principles of Clinical Pathology. Eulenburg, Real-Encyclopädie der gesammten Heilkunde. Gould, Medical Dictionary.

SECOND YEAR.

Lectures on selected topics. Professor FITZ. (H.M.S.)	<i>Twice a week,</i>	
	<i>second half-year.</i>	32
Clinical lectures. Professor FITZ. (M.G.H.)	<i>Once a week, second half-</i>	
	<i>year.</i>	16
Clinical lectures. Dr. CUTLER. (M.G.H.)	<i>Twice a week, second half-</i>	
	<i>year.</i>	32
Exercises in sections. Drs. STONE, JOSLIN, WHITE, and BADGER.	<i>Twice</i>	
	<i>a week, second half-year, for each student.</i>	32
Laboratory exercises.	<i>Five times a week, second half-year.</i>	80

THIRD YEAR.

Lectures on selected topics. Professor FITZ. (H.M.S.)	<i>Twice a</i>	
	<i>week, first half-year.</i>	32
Clinical lectures. Professor FITZ. (M.G.H.)		
	<i>Twice a week, first half-year.</i>	32
	<i>Once a week, second half-year.</i>	16
Clinical lectures. Dr. CUTLER. (M.G.H.)	<i>Once a week, first half-</i>	
	<i>year.</i>	16
Ward Visits. Dr. CUTLER. (M.G.H.)	<i>During the year.</i>	8
Exercises in sections. Drs. STONE, JOSLIN, WHITE, and BADGER.	<i>First</i>	
	<i>half-year.</i>	8

Clinical Medicine.

FREDERICK C. SHATTUCK, M.D., *Jackson Professor of Clinical Medicine.*

GEORGE G. SEARS, M.D., *Assistant Professor of Clinical Medicine.*

HERMAN F. VICKERY, M.D., *Instructor in Clinical Medicine.*

HENRY JACKSON, M.D., *Instructor in Clinical Medicine.*

RICHARD C. CABOT, M.D., *Instructor in Clinical Medicine.*

JOHN W. BARTOL, M.D., *Assistant in Clinical Medicine.*

JAMES M. JACKSON, M.D., *Assistant in Clinical Medicine.*

FRANCIS P. DENNY, M.D., *Assistant in Clinical Medicine.*

WILLIAM H. ROBES, JR., M.D., *Assistant in Clinical Medicine.*

WILLIAM H. SMITH, M.D., *Assistant in Clinical Medicine.*

WILDER TILESTON, M.D., *Assistant in Clinical Medicine.*

EDWIN A. LOCKE, M.D., *Assistant in Clinical Medicine.*

FREDERICK T. LORD, M.D., *Assistant in Clinical Medicine.*

The study of Clinical Medicine begins with the second half of the second year. Daily instruction is given by clinical lectures, hospital visits, and other exercises.

Second year.—The following courses continue during the second half-year.

Physical diagnosis for the class in small sections. Every student attends two exercises a week.

Clinical instruction for the entire class, five times a week, in diagnostic methods, diagnosis, and treatment.

Third year.—Four exercises a week are held in the hospital amphitheatres. The teaching is more advanced, with greater stress on therapeutics. The amount of clinical material is so large that during the year a wide range of diseases is illustrated practically. Even of the rarer affections often several examples are shown.

Supplementary instruction is given to the class in small sections in connection with the Department of Theory and Practice. Each student attends forty-eight exercises during the year.

Text-books.—Osler, *Practice of Medicine*. Strümpell, *Text-book of Medicine*. Musser, *Medical Diagnosis*. Simon, *Clinical Diagnosis*. Cabot, *Physical Diagnosis*. Forchheimer, *Prophylaxis and Treatment of Internal Disease*.

Collateral Reading.—Allbutt, *System of Medicine*. Twentieth Century *Practice of Medicine*. Nothnagel, *Specielle Pathologie und Therapie*. Fagge and Pye-Smith, *Practice of Medicine*. Gowers, *Diseases of the Nervous System*. Hare, *Practical Diagnosis*. Butler, *Diagnostics of Internal Medicine*. Le Febvre, *Physical Diagnosis*. Sahli, *Diagnostic Methods*.

SECOND YEAR.

Clinics. Professor SHATTUCK and Dr. VICKERY (M.G.H.) and Assistant Professor SEARS and Dr. H. JACKSON (B.C.H.). <i>Five times a week, second half-year.</i>	80
Physical Diagnosis. Drs. CABOT, J. M. JACKSON, and LORD (M.G.H.), Drs. ROBEY and LOCKE (B.C.H.), and Dr. DENNY (B.D.). <i>Two exercises a week, second half-year, for each student.</i>	32

THIRD YEAR.

Clinics. Professor SHATTUCK. (M.G.H.) <i>Twice a week, first half-year; once a week, second half-year.</i>	48
Assistant Professor SEARS. (B.C.H.) <i>Once a week.</i>	32
Dr. H. JACKSON. (B.C.H.) <i>Once a week, first half-year.</i>	16
Dr. BARTOL. (B.C.H.) <i>Twice a week, second half-year.</i>	32

Pediatrics.

THOMAS MORGAN ROTCH, M.D., *Professor of Pediatrics.*

JOHN H. MCCOLLOM, M.D., *Assistant Professor of Contagious Diseases.*

JOHN L. MORSE, M.D., *Assistant Professor of Pediatrics.*

MAYNARD LADD, M.D., *Instructor in Pediatrics.*

GEORGE A. CRAIGIN, M.D., *Clinical Instructor in Pediatrics.*

CHARLES H. DUNN, M.D., *Assistant in Pediatrics.*

Third Year.—Lectures on selected topics preparatory for the clinical teaching are given early in the year. Clinical lectures are given from November to April inclusive at the Children's Hospital and at North Grove Street; the students are required to take an active part in the examination and discussion of the cases. A certain number of recitations on subjects selected as best taught in this way are held in the course of the year, and a large amount of case teaching occurs in the latter part of the year. Sectional teaching at the bedside is given from October to May inclusive, and comprises a large proportion of the year's instruction. During the first half-year the class in sections receives instruction three times a week in the contagious wards of the Boston City Hospital, where each student is shown and examines cases of diphtheria, scarlet fever, and measles. Each student is taught the technique of intubation, and has an opportunity to see intubation performed. A written report of the cases seen is required. In all the clinical and sectional teaching especial attention is paid to clinical therapeutics.

Text-book.—Rotch, Pediatrics.

Collateral Reading.—Keating, Cyclopaedia of the Diseases of Children. Northrup, American Edition of The Diseases of Children, by Ashby

and Wright. Jacobi, Therapeutics of Infancy and Childhood. Holt, Diseases of Infancy and Childhood. Sachs, The Nervous Diseases of Children.

THIRD YEAR.

Lectures. Professor Rotch. (H.M.S.)	<i>Once a week, October 4 to December 20; twice a week, January 31 to February 26; once a week, March 5 to April 2.</i>	24
Dr. LADD. (H.M.S.)	<i>Once a week, January 3 to January 24.</i>	4
Clinical lectures. Professor Rotch. (Ch.H.)	<i>Once a week, October 5 to February 8.</i>	18
Assistant Professor Morse. (North Grove St.)	<i>Once a week, February 15 to March 29.</i>	6
Recitations and Case Teaching. Dr. Morse.	<i>Once a week, March 4 to April 1; twice a week, April 8 to May 28.</i>	19
Section Teaching.		
Assistant Professor McCollom. (S.D.B.C.H.)	<i>Three times a week, first half-year.</i>	
Assistant Professor Morse. (Ch.H. and I.H.)		41
Dr. Craigin. (Ch.H.)		49
Dr. Ladd. (Ch.H. and I.H.)		27
Dr. Dunn. (Ch.H. and I.H.)		31
Each student receives 29 hours of section teaching.		29

Surgery.

The Division of Surgery is composed of the departments of surgery, clinical surgery, orthopedic surgery, and surgical pathology.

J. COLLINS WARREN, M.D., LL.D., *Moseley Professor of Surgery.*
 EDWARD H. BRADFORD, M.D., *Professor of Orthopedic Surgery.*
 MAURICE H. RICHARDSON, M.D., *Professor of Clinical Surgery.*
 HERBERT L. BURRELL, M.D., *Professor of Clinical Surgery.*
 EDWARD H. NICHOLS, M.D., *Assistant Professor of Surgical Pathology.*
 JAMES G. MUMFORD, M.D., *Instructor in Surgery.*
 JOHN B. BLAKE, M.D., *Instructor in Surgery.*
 HOWARD A. LOTHROP, M.D., *Instructor in Surgery.*
 CHARLES A. PORTER, M.D., *Instructor in Surgery.*
 ROBERT W. LOVETT, M.D., *Instructor in Orthopedics.*
 ELLIOTT G. BRACKETT, M.D., *Instructor in Orthopedics.*
 PAUL THORNDIKE, M.D., *Instructor in Genito-Urinary Surgery.*
 JOEL E. GOLDTHWAIT, M.D., *Instructor in Orthopedics.*
 JOHN DANE, M.D., *Instructor in Orthopedics.*
 ROBERT B. GREENOUGH, M.D., *Instructor in Surgery.*

GEORGE W. GAY, M.D., *Lecturer on Surgery.*
SAMUEL J. MIXTER, M.D., *Lecturer on Surgery.*
GEORGE H. MONKS, M.D., *Lecturer on Surgery.*
FRANCIS S. WATSON, M.D., *Lecturer on Genito-Urinary Surgery.*
FRANCIS B. HARRINGTON, M.D., *Lecturer on Surgery.*
WILLIAM E. FAULKNER, M.D., *Assistant in Surgery.*
FRANKLIN G. BALCH, M.D., *Assistant in Surgery.*
FRED B. LUND, M.D., *Assistant in Surgery.*
GEORGE W. W. BREWSTER, M.D., *Assistant in Surgery.*
JAMES S. STONE, M.D., *Assistant in Surgery.*
ERNEST A. CODMAN, M.D., *Assistant in Surgery.*
DANIEL F. JONES, M.D., *Assistant in Surgery.*
L. R. G. CRANDON, M.D., *Assistant in Surgery.*
CHANNING C. SIMMONS, M.D., *Assistant in Surgery.*

— — —, M.D., *Austin Teaching Fellow in Surgery.*

Instruction is given by systematic lectures, recitations, lecture demonstrations, clinical lecture demonstrations, and by section teaching in the wards, in the out-patient departments, and in the laboratory.

Second and Third years.—A course in surgical pathology, consisting of laboratory exercises, in which are studied the healing of wounds, fractures, diseases of bones and joints, and the special pathology which is of surgical importance, is given in the month of January. A series of clinical lectures, illustrating the lesions studied in this course in the laboratory, is given at the Boston City Hospital. During the second half of the second year and in the first half of the third year the instruction consists of systematic lectures, recitations, demonstrations of surgical pathological material, and clinical demonstrations. Every week the student has four lectures, demonstrations or recitations, and four clinical exercises illustrating the lectures, demonstrations and recitations. In the first week the systematic lectures are given on surgical technic; in the second week on surgical materials and case-taking; in the third week on trauma, hemorrhage, sepsis, etc. The various subjects in surgery are taken up in successive weeks and illustrated contemporaneously by clinical lectures and demonstrations, until the end of the first half of the third year. During the first half of the third year the surgical anatomy of the various subjects in regional surgery is demonstrated by Professor RICHARDSON. As early as may be in the second half of the second year, the course in surgical technic is given. It consists of six hours of lectures to the entire class, and of twelve laboratory exercises, of two hours each, to the class in sections. The laboratory course consists of the application of bandages and surgical apparatus, and of the

preparation and application of surgical dressings and materials by the students.

After the course in surgical technic the student is required to serve satisfactorily at least one month in the surgical out-patient department of the Massachusetts General Hospital or the Boston City Hospital. In the month of February all the students will be assigned to serve one month during the year beginning April 1, 1907, at one or other of these hospitals. During the month of required service as surgical dresser the student will receive instruction in anesthesia. In the first half of the third year the student receives instruction in the surgical wards of the Massachusetts General and Boston City Hospitals. In this section teaching students have instruction on a number of selected subjects in major surgery, are brought into personal contact with the patient at the bedside, and have practical experience in the diagnosis, prognosis, and treatment of surgical cases.

A required course in orthopedic surgery is given in the first half of the year and consists of lectures at the Medical School and of clinical exercises at the Children's Hospital.

A required course in genito-urinary surgery is given in the first half of the third year, consisting of eight lectures. In the second half of the third year the class is divided into small sections, and each student receives instruction for six hours in the out-patient departments in the details of minor genito-urinary work.

Books recommended.—International Text-book of Surgery. Warren, Surgical Pathology. American Text-book of Surgery (edition of 1903). Park's Surgery by American Authors. Cheever, Lectures on Surgery. Dennis, System of Surgery. König, Lehrbuch der Speciellen Chirurgie. Bryant, Operative Surgery. Jacobson (and Steward), Operations of Surgery. Brewer, Text-book of Surgery. DaCosta, Modern Surgery. Albert, Surgical Diagnosis (translated by Frank). Scudder, Treatment of Fractures. Stimson, Fractures and Dislocations. Marchand, Wundheilung. Gould, Elements of Surgical Diagnosis. Wharton, Minor Surgery and Bandaging. Whitman, Orthopedic Surgery. Bradford and Lovett, Orthopedic Surgery. Hoffa, Orthopädische Chirurgie. Keyes, Surgical Diseases of the Genito-Urinary Organs. Morton, Genito-Urinary Diseases and Syphilis. Mumford, Clinical Talks on Minor Surgery. Burrell and Blake, Case Teaching in Surgery.

SECOND YEAR.

Laboratory course in Surgical Pathology. Assistant Professor NICHOLS.

(H.M.S.) *Twenty three-hour exercises during January.* (See Pathology.)

Clinical lectures in connection with the above course. Assistant Professor NICHOLS. (B.C.H.) <i>Twelve exercises during January.</i>	12
Laboratory course in Surgical Technic. Dr. LOTHROP. <i>Six lectures to the entire class.</i>	6
<i>Twelve two-hour exercises for each student during second half of second year.</i>	24
Systematic lectures, demonstrations, and recitations. Professors WARREN and BURRELL. (H.M.S.) <i>Four times a week.</i>	128
Clinical demonstrations in connection with the above lectures. Professor RICHARDSON (M.G.H.), and Drs. J. B. BLAKE and LOTHROP (B.C.H.). <i>Four times a week.</i>	64

THIRD YEAR.

Systematic lectures, demonstrations, and recitations. Professors WARREN and BURRELL. (H.M.S.) <i>Three times a week, first half-year.</i>	48
Regional Surgery. Professor M. H. RICHARDSON. (H.M.S.) <i>A series of demonstrations, as may be found necessary.</i>	
Clinical demonstrations in connection with above lectures. Professors WARREN (M.G.H.) and BURRELL (B.C.H.). <i>Twice a week, first half-year.</i>	32
Clinical lectures. Professor M. H. RICHARDSON. (M.G.H.) <i>Once a week, second half-year.</i>	16
Professor BURRELL, and Drs. GAY and MONKS. (B.C.H.) <i>Twice a week, second half-year.</i>	32
Clinical exercises in surgical wards. Drs. HARRINGTON, LOTHROP, CODMAN, LUND, and CRANDON. <i>Twice a week for eight weeks, first half-year.</i>	16
Lectures and demonstrations. Orthopedic surgery. Professor BRADFORD. (H.M.S. and Ch. H.) <i>Once a week, first half-year.</i>	16
Lectures. Genito-Urinary Surgery. Dr. THORNDIKE. (H.M.S.) <i>Once a week for eight exercises in October and November.</i>	8
Section teaching at the Hospitals. <i>One hour a day for six days.</i>	6
Case Teaching. Dr. J. B. BLAKE. (H.M.S.) <i>Once a week, beginning March 1.</i>	12

Obstetrics and Gynaecology.

WILLIAM L. RICHARDSON, M.D., <i>Professor of Obstetrics.</i>	
CHARLES M. GREEN, M.D., <i>Associate Professor of Obstetrics and Clinical Gynaecology.</i>	
FRANKLIN S. NEWELL, M.D., <i>Instructor in Obstetrics and Gynaecology.</i>	
MALCOLM STORER, M.D., <i>Assistant in Gynaecology.</i>	
WILLIAM P. GRAVES, M.D., <i>Assistant in Gynaecology.</i>	
ERNEST B. YOUNG, M.D., <i>Assistant in Gynaecology.</i>	

HOWARD T. SWAIN, M.D., *Assistant in Obstetrics.*

LEO V. FRIEDMAN, M.D., *Assistant in Obstetrics.*

JAMES R. TORBERT, M.D., *Assistant in Obstetrics.*

OBSTETRICS.

Third year. — Instruction is given by lectures, recitations, conferences, and clinical teaching. Students are required to take charge of at least six cases of labor, to receive clinical instruction on at least one of them, to care for their patients during the convalescence, and to make full written reports of the cases. Many of these reports are read at the conferences and discussed by the class and the instructors.

Text-book. — J. W. Williams, *A Text-book of Obstetrics.*

Collateral Reading. — Reynolds and Newell, *Practical Midwifery.* Hirst, *A Text-book of Obstetrics.* Lusk, *The Science and Art of Midwifery.* Jellett, *Manual of Midwifery.*

THIRD YEAR.

Lectures on the Theory and Practice of Obstetrics. Professor W. L.

RICHARDSON. (H.M.S.) *Twice a week.* 64

Recitations. Dr. NEWELL. (H.M.S.) *Once a week.* 32

Conferences. Professor W. L. RICHARDSON, Professor GREEN, and Drs.

NEWELL, SWAIN, FRIEDMAN, and TORBERT. (H.M.S.) *Once a week.* 32

Practical instruction in Clinical Obstetrics. Drs. NEWELL, SWAIN, FRIEDMAN, and TORBERT. *Throughout the year, i.e., every student must receive instruction on one of the six cases of labor which he attends, and may call for instruction in the other five cases if he desires.*

GYNAECOLOGY.

Third year. — Lectures, recitations, and clinical instruction are given at the Boston City Hospital and the Boston Dispensary. The large out-patient departments of these institutions are utilized to accustom the student to the methods of examination, to the perfecting of diagnosis, and to the simple forms of treatment.

Text-book. — Dudley, *Principles and Practice of Gynaecology.*

Collateral Reading. — Skene, *Diseases of Women.* Davenport, *Diseases of Women.* Winckel, *Diseases of Women.* Emmet, *Principles and Practice.* Byford, *Manual of Gynaecology.* Penrose, *Textbook of Diseases of Women.* Ashton, *Practice of Gynaecology.*

THIRD YEAR.

Lectures or recitations. Professor GREEN. (H.M.S.) *Twice a week, second half-year.* 32

Clinical exercises. Dr. STORER (B.D.), Drs. NEWELL and YOUNG (B.C.H.). *In sections, nine times a week in February and March, then three times a week. Every student receives six hours of instruction.* 6

Dermatology and Syphilis.

JOHN T. BOWEN, M.D., *Assistant Professor of Dermatology.*

ABNER POST, M.D., *Instructor in Syphilis.*

CHARLES J. WHITE, M.D., *Instructor in Dermatology.*

HARVEY P. TOWLE, M.D., *Assistant in Dermatology.*

C. MORTON SMITH, M.D., *Assistant in Syphilis.*

FREDERICK S. BURNS, M.D., *Assistant in Dermatology.*

DERMATOLOGY.

Third year.—A course of lectures, recitations, and demonstrations is given during October and November, and a weekly clinical exercise extends throughout the year.

Collateral Reading.—Stelwagon. Duhring. Hyde. Robinson. Crocker. Kaposi. v. Ziemssen. Besnier. Van Harlingen. Jackson. Taylor.

THIRD YEAR.

Lectures, demonstrations, and recitations on diseases of the skin. Assistant Professor BOWEN. (H.M.S.) *Once a week during October and November.* 8

Clinical Dermatology. Assistant Professor BOWEN. (M.G.H.) *Once a week.* 32

Clinical exercises. Drs. TOWLE and BURNS. (M.G.H.) *In sections, twice a week, February and March.* 8

SYPHILIS.

Third year.—Lectures and clinical instruction are given at the Boston Dispensary.

THIRD YEAR.

Lectures. Dr. POST. (H.M.S.) *Once a week, December and January.* 8
Clinical lectures. Drs. POST and SMITH. (B.D.) *Once a week, April and May.* 8

Clinical exercises. Drs. POST and SMITH. (B.D.) *In sections, twice a week, second half-year. Each student attends six two-hour exercises.* 12

Neurology.

JAMES J. PUTNAM, M.D., *Professor of Diseases of the Nervous System.*

EDWARD W. TAYLOR, M.D., *Instructor in Neurology.*

PHILIP COOMBS KNAPP, M.D., *Clinical Instructor in Diseases of the Nervous System.*

GEORGE A. WATERMAN, M.D., *Assistant in Neurology.*

Second year.—Instruction is given during December on the pathology of the nervous system. The course is illustrated by lantern projections of histological preparations and by work in the laboratory.

Third year.—During the first half-year one lecture a week, and during the second half-year two lectures a week are given at the Massachusetts General Hospital. The lectures are illustrated by cases from the large and excellent out-patient service, and from the medical and surgical wards of the hospital. In addition, the students are given an opportunity to study cases outside the lecture hours, and to report on them.

Text-book.—Putnam and Waterman, *Studies in Neurological Diagnosis*.

Collateral Reading.—Gowers, *Diseases of the Nervous System*. Dana, *Text-book of Nervous Diseases*. Herter, *Manual of Diagnosis of Nervous Diseases*. Sachs, *Nervous Diseases of Children*. Mills, *The Nervous System and Its Diseases*. Oppenheim, *Diseases of the Nervous System* (English translation). Berkeley, *Mental Diseases*. Church and Petersen, *Nervous and Mental Diseases*. Jacob, *Atlas of the Nervous System*.

SECOND YEAR.

Pathology of the Nervous System. Assistant Professor SOUTHARD.
(H.M.S.) *Fifteen exercises during December.* (See Pathology.) 45

THIRD YEAR.

Clinical exercises. Professor PUTNAM. (M.G.H.) *Once a week, first half-year; twice a week, second half-year.* 48

Psychiatry.

EDWARD COWLES, M.D., LL.D., *Instructor in Mental Diseases*.

GEORGE T. TUTTLE, M.D., *Clinical Instructor in Mental Diseases*.

WILLIAM NOYES, M.D., *Clinical Instructor in Mental Diseases*.

Third year.—Systematic lectures are given at the Medical School during the second half-year, and clinical instruction is offered at the Boston Insane Hospital.

Text-books.—Kraepelin, *Psychiatrie* (English translation, Defendorf—*Clinical Psychiatry*). Clouston, *Clinical Lectures on Mental Diseases*. Folsom, *Monograph in Pepper's System of Medicine*. Berkley, *Mental Diseases*. Regis, *Manual of Mental Medicine*. Paton, *Psychiatry*.

Collateral Reading.—Krafft-Ebing, *Text-book of Insanity*. Church and Peterson, *Nervous and Mental Diseases*. Brower and Bannister, *Insanity*. James, *Psychology*. Tuke, *Dictionary of Psychological Medicine*. Baldwin, *Dictionary of Philosophy and Psychology*. Hall, *Adolescence*. Barr, *Mental Defectives*.

THIRD YEAR.

Lectures.	Dr. COWLES. (H.M.S.)	<i>Once a week, second half-year.</i>	16
Clinical exercises.	Dr. NOYES. (B.I.H.)	<i>At stated intervals.</i>	8-4

Ophthalmology.

- MYLES STANDISH, M.D., *Assistant Professor of Ophthalmology.*
 EDWIN E. JACK, M.D., *Instructor in Ophthalmology.*
 ALEXANDER QUACKENBOSS, M.D., *Instructor in Ophthalmology.*
 HENRY H. HASKELL, M.D., *Assistant in Ophthalmology.*
 EDMUND W. CLAP, M.D., *Assistant in Ophthalmology.*
 FRED M. SPALDING, M.D., *Assistant in Ophthalmology.*

Third year.—Instruction consists of lectures at the Medical School and of clinical exercises devoted to diagnostic methods, diagnosis, and treatment at the Massachusetts Charitable Eye and Ear Infirmary.

Text-books.—DeSchweinitz. Fuchs. Swanzy. Jackson.

Collateral Reading.—Loring, On the Ophthalmoscope. Landolt, Refraction and Accommodation. Noyes. Norris and Oliver, System of Diseases of the Eye. Haab, Atlas of the External Diseases of the Eye.

THIRD YEAR.

Lectures.	Assistant Professor STANDISH. (H.M.S.)	<i>Twice a week, in October and November.</i>	16
Clinical exercises.	Drs. JACK, QUACKENBOSS, CLAP, SPALDING, and HASKELL. (E. and E.I.)	<i>In sections, ten hours a week, first half-year. Every student receives fourteen hours of instruction.</i>	14

Otology.

- CLARENCE J. BLAKE, M.D., *Professor of Otology.*
 EUGENE A. CROCKETT, M.D., *Instructor in Otology.*
 PHILIP HAMMOND, M.D., *Instructor in Otology.*
 WALTER A. LECOMPTE, M.D., *Assistant in Otology.*
 ———, M.D., *Assistant in Otology.*

Third year.—Lectures are given at the Medical School, and clinical instruction at the Massachusetts Charitable Eye and Ear Infirmary.

Text-books.—Brühl and Politzer. Bacon.

Collateral Reading.—Poltitzer, Text-book of Diseases of the Ear; 4th ed., translated by Ballin and Heller. Blake and Reik.

THIRD YEAR.

Lectures.	Professor BLAKE. (H.M.S.)	<i>Twice a week, February and March; once a week, April and May.</i>	24
Clinical exercises.	(E. and E.I.)	<i>In sections, two hours, three times a week, second half-year. Every student attends four or five exercises.</i>	8-10

Laryngology and Rhinology.

ALGERNON COOLIDGE, JR., M.D., *Assistant Professor of Laryngology.*

FREDERIC C. COBB, M.D., *Instructor in Laryngology.*

JOSEPH P. CLARK, M.D., *Assistant in Laryngology.*

ROCKWELL A. COFFIN, M.D., *Assistant in Laryngology.*

JOSEPH L. GOODALE, M.D., *Assistant in Laryngology.*

HARRIS P. MOSHER, M.D., *Assistant in Laryngology.*

Third year. — Instruction consists of lectures and demonstrations, and of training in the use of instruments. The entire class has one lecture a week during the second half-year. For the practical work at the Massachusetts General Hospital and the Boston Dispensary, the class is divided into small sections.

THIRD YEAR.

Lectures. Assistant Professor COOLIDGE. (H.M.S.) *Once a week, second half-year.* 16

Clinical exercises. Assistant Professor COOLIDGE, and Drs. CLARK, GOODALE, MOSHER (M.G.H.), and COBB (B.D.). *In sections, second half-year. Twelve exercises for each student.* 12

Legal Medicine.

EZRA R. THAYER, LL.B., will deliver a voluntary course of not more than six lectures on the relation of the medical profession to the law and the courts, during February, on evenings to be announced later. These lectures will be open to students and to the profession.

Legal Medicine is no longer taught as a separate study; but the several departments will give instruction in the medico-legal aspects of their respective subjects.

Municipal Sanitation.

SAMUEL H. DURGIN, M.D., *Lecturer on Hygiene.*

THIRD YEAR. OPTIONAL COURSE.

Lectures. Dr. DURGIN. (H.M.S.) *Twice a week, February and March.* 16

FOURTH-YEAR ELECTIVES

The electives of the fourth year are given as half-courses. A half-course occupies the entire day for one month (the all-day plan) or the forenoons or the afternoons for two months (the half-day plan). Each half-course has a value of 125 hours. Eight half-courses are necessary to satisfy the requirement of one thousand hours of work demanded in the fourth year. The two half-courses elected for the first two or the last two months of each half-year must be formed on the same plan to avoid conflict.

Neuropathology, medicine, pediatrics, surgery, and obstetrics offer electives on the all-day plan.

Anatomy, histology, embryology, bacteriology, clinical surgical pathology, genito-urinary surgery, orthopedics, surgical pathology, gynaecology, dermatology, neurology and psychiatry, ophthalmology, otology, and laryngology offer electives on the half-day plan.

Physiology, comparative physiology, biochemistry, pathology, clinical pathology, and hygiene offer electives on both plans.

The several half-courses offered by any one department are not necessarily graded courses, but represent hours of clinical, technical, and research work.

Students who intend to become general practitioners are advised to elect the following group of subjects:—

Medicine	3 half-courses.
Pediatrics	1 “ “
Surgery	1 “ “
Obstetrics	1 “ “
Neurology and psychiatry, dermatology and syphilis, or gynaecology	1 “ “
Anatomy, histology, embryology, physiology, biochemistry, bacteriology, neuropathology, orthopedics, or hygiene	1 “ “

Students interested in surgery are advised to elect the following group of subjects:—

Medicine	2 half-courses.
Surgery	2 “ “
Genito-urinary surgery	1 “ “
Anatomy	1 “ “
Gynaecology or clinical surgical pathology	1 “ “
Orthopedics or surgical pathology	1 “ “

Students wishing to specialize in any particular branch of medical study may elect more than one of the half-courses offered in a given subject, but no student will be allowed to devote his whole year to one subject without the consent of the head of the department concerned. Special arrangements will be made for students desirous of paying exclusive attention to other subjects than those listed, for example, pharmacology and comparative pathology.

When a student's research work in an elective is necessarily prolonged beyond the time elected for that subject, he will be allowed, with the permission of the Board of Administration, to make such changes in his electives as will enable him to finish his research work, provided the time required does not extend beyond the school year.

The final choice of electives must be left at the Dean's office on or before September 15.

The Faculty reserves the right to modify the selection of the courses chosen by any student.

The nature of the examinations shall be determined by each department subject to the approval of the Faculty. The student's credit may be based on his daily written record of work, and on a practical or written examination at the end of his course, or upon all combined. The mark assigned must be sent immediately to the Dean's office.

FOURTH-YEAR ELECTIVES ARRANGED UNDER DEPARTMENTS

Anatomy.—Half-courses, afternoons, throughout the year.

Anatomy I October–November; December–January;
February–March.

Anatomy II April–May.

Comparative Anatomy.—Half-courses, forenoons or afternoons.

(1) Comparative Anatomy. Forenoons or afternoons.

I. December–January.

II. February–March.

III. April–May.

(2) Embryology. Half-courses, afternoons, second half-year.

IV. February–March.

V. April–May.

(3) Histology. Half-course, afternoons, second half-year.

VI. April–May.

Physiology.—Half-courses, forenoons, afternoons, or all day throughout the year.

Comparative Physiology. — Half-courses, forenoons, afternoons, or all day, throughout the year.

Biological Chemistry (Biochemistry 20). — Half-courses, forenoon throughout the year; all day or afternoons, first half-year.

Bacteriology. — Half-courses, forenoons or afternoons, second half-year.

Pathology. — (1) Pathology. Half-courses, forenoons or all day, second half-year.

(2) Neuropathology. Half-courses, all day, throughout the year.

Comparative Pathology. — No courses offered, but special arrangements can be made with the department.

Pharmacology. — No courses offered.

Medicine. — (1) Clinical Medicine. Half-courses, all day, throughout the year.

(2) Theory and Practice. Half-courses, all day, November to May inclusive.

(3) Clinical Pathology. Half-courses, forenoons or all day, first half-year.

Pediatrics. — Half-courses, all day, throughout the year.

Clinical Surgical Pathology. — Half-courses, forenoons, throughout the year.

Surgery. — (1) Surgery. Half-courses, all day, throughout the year.

(2) Genito-Urinary Surgery. Half-courses, forenoons, throughout the year.

(3) Orthopedics. Half-courses, afternoons, throughout the year.

(4) Surgical Pathology. Half-courses, afternoons, throughout the year.

Obstetrics and Gynaecology: —

(1) Obstetrics. Half-courses, all day, throughout the year.

(2) Gynaecology. “ forenoons, “ “

Dermatology and Syphilis. “ “ “ “

Neurology and Psychiatry. “ “ “ “

Ophthalmology. “ “ second half-year.

Otology. “ “ throughout the year.

Laryngology. “ “ first half-year.

Hygiene. “ “ afternoons, or all day, throughout the year.

DIAGRAMS OF FOURTH-YEAR ELECTIVES

Half-courses. — All-day Plan.

	OCT.	NOV.	DEC.	JAN.		FEB.	MAR.	APR.	MAY.
A.M. 9-1									
P.M. 2-6									

Physiology.	Neuropathology.	Pediatrics.
Comparative Physiology.	Clinical Medicine.	Surgery.
Biochemistry.*	Theory and Practice.	Obstetrics.
Pathology.**	Clinical Pathology.*	Hygiene.

Half-courses. — Half-day Plan.

	OCT.	NOV.	DEC.	JAN.		FEB.	MAR.	APR.	MAY.
A.M. 9-1									
P.M. 2-6									

Forenoons.

Comparative Anatomy.
 Physiology.
 Comparative Physiology.
 Biochemistry.
 Bacteriology.**
 Pathology.**
 Clinical Pathology.*
 Clinical Surgical Pathology.
 Genito-Urinary Surgery.
 Gynaecology.
 Dermatology and Syphilis.
 Neurology and Psychiatry.
 Ophthalmology.**
 Otology.
 Laryngology.*
 Hygiene.

Afternoons.

Anatomy.
 Comparative Anatomy.
 Histology.**
 Embryology.**
 Physiology.
 Comparative Physiology.
 Biochemistry.*
 Bacteriology.**
 Orthopedics.
 Surgical Pathology.
 Hygiene.

* = first half-year.

** = second half-year.

Group of Courses Recommended for the General Practitioner.

	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY.
A.M. 9-1	Medicine	Medicine	Medicine	Pediatrics	Surgery	Obstetrics	1	
P.M. 2-6							2	

Medicine	3 half-courses.
Pediatrics	1 " "
Surgery	1 " "
Obstetrics	1 " "
(1) Neurology and psychiatry, dermatology, or gynaecology	1 " "
(2) Anatomy, histology, embryology, physi- ology, biochemistry, bacteriology, neuro- pathology, orthopedics, or hygiene	1 " "

Group of Courses Recommended to Men interested in Surgery.

	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY.
A.M. 9-1	Medicine	Medicine	Surgery	Surgery	G. U. Surgery		1	
P.M. 2-6					Anatomy		2	

Medicine	2 half-courses.
Surgery	2 " "
Genito-urinary surgery	1 " "
Anatomy	1 " "
(1) Gynaecology or clinical surgical pathology	1 " "
(2) Orthopedics or surgical pathology	1 " "

GENERAL PLAN OF INSTRUCTION

ANATOMY. Half-courses, afternoons, throughout the year.

(1) *Anatomy I.* October and November; December and January; February and March.

This is a dissecting course in which the three parts of the body are to be dissected. It will be under the direction of the demonstrator. Each student will be quizzed once a week and there will be a certain amount of supervision by the assistants.

N. B.—No one can take this course who has not passed his first-year anatomy.

(2) *Anatomy II.* April and May.

This is *not* to be considered a course for professional anatomists, but one suited to the practitioner. It will consist of topographical anatomy, the study of frozen sections, and of special parts of anatomy; in the selection of the latter every effort will be made to meet the wishes of those taking the course. For instance, some can give particular attention to the joints, others to the circulation, etc. Though there will be no systematic dissection the cadaver will be used for study and for special dissections. This elective will be under the immediate supervision of the professor of anatomy.

COMPARATIVE ANATOMY. Half-course, throughout the year.

(1) *Comparative Anatomy.* Three half-courses. These courses may be taken either consecutively or separately. The general morphology of vertebrates and the anatomy of important types will be studied.

(2) *Embryology I.* February and March. Elementary laboratory course, especially correlated with anatomy and pathology.

(3) *Embryology II.* April and May. Proresearch work. Each student will be given a special piece of work to verify and extend some important recent investigation.

(4) *Histology.* April and May. General laboratory course offering training in methods. Each student must select in advance one of the three following forms of this course:—

(a) General Histology, intended specially as preparation for advanced work in anatomy and pathology.

(b) General structure and development of the nervous system.

(c) General structure and development of the urogenital system.

PHYSIOLOGY. Half-courses, forenoons, afternoons, or all day, throughout the year.

The elective work in physiology will be of two classes:—

(A) Detailed study in any special subject in physiology. Such study will include preparation of bibliographies, reading of classical papers, repetition of important experiments, and reports on work accomplished.

(B) Investigation. Students, properly qualified, who are willing to spend sufficient time in research, will be welcomed into the laboratory and given problems to work upon. During the conduct of their investigations they will receive the counsel and guidance of other investigators working with them.

COMPARATIVE PHYSIOLOGY. Half-courses, forenoons, afternoons, or all day, throughout the year.

Students may elect work in any field of physiology. It is to be presumed that such students desire additional work in physiology to fit them for some special field of medicine, for example, the diseases of the nervous system; or they may wish to pursue physiology, pathology, or some other biological science as a profession. They will be received into the research laboratories of the department, and will carry on their studies with the personal assistance of Professor PORTER. The work will consist of fundamental experiments, the study of accessory data, and the reading of selected original investigations. This course is open to qualified persons not students in the Medical School.

BIOCHEMISTRY (20).—Research in Biological Chemistry. Half-courses, forenoons, throughout year; all day or afternoons, first half-year.

A student may elect work in any field of biochemical research for which he is qualified by his previous training. For detailed information he is referred to the pamphlet of the Department of Biological Chemistry.

BACTERIOLOGY. Half-courses, forenoons, afternoons, or all day, second half-year.

One month electives will be of two kinds, including, (*a*) instruction in methods of diagnosis depending upon bacteriological procedures; and (*b*) instruction in methods of bacteriological diagnosis in use in Health Board laboratories, including the examination of waters and soils.

Longer courses may include one or the other of these, together with a limited piece of research work.

PATHOLOGY.

(1) *Pathology*. Half-courses, forenoons or all day, second half-year. The work will consist of (a) training in the technical methods used in pathology; (b) attendance at postmortem examinations at the various hospitals, and the fixation and study of tissues obtained from them; (c) study of the more unusual pathological lesions; (d) research work in any line which a student demonstrates his fitness to pursue.

(2) *Neuropathology*. Half-courses, all day, throughout the year. The course is given at the Danvers Insane Hospital, and involves (a) attendance at the daily case-readings of the hospital staff, with analysis and observation of cases presented (one to three daily); (b) work in the wards upon selected cases; (c) laboratory work. Each student is assigned the tissues and protocol of a neuropathological case, the report of which will involve personal employment of the approved technical methods in neuropathology, as well as a variable amount of library work. When elected for more than a month, the course may involve work on a neuropathological problem. The course is intended as preparatory for neurological or psychiatrial work or as auxiliary to work on general medicine.

HYGIENE. Half-courses, forenoons, afternoons, or all day, throughout the year.

The instruction will be suited to the qualifications of the individual student. It will consist in part of laboratory instruction and in part of special research. The regular course of laboratory instruction will comprise the analysis of air, soils, water and foods, and the investigation of disinfectants, etc.

MEDICINE. — I. *Clinical Medicine*. Half-courses, all day, throughout the year.

The morning will be devoted to clinical work in various out-patient departments and hospital wards, the afternoon to lectures on special subjects. There will be required also a report of a single case which shall serve as the subject of a clinical conference, and a thesis containing original work of some character, the length of which will vary according to the number of half-courses elected. Eight such courses are offered, and the student may elect as many as he chooses.

(1) *Clinical Instruction*. This will be of two kinds:—

(a) Work as assistant in the out-patient department or hospital wards.

(b) Attendance on special courses of advanced clinical medicine to be given simultaneously at each hospital, three days a week, between nine and ten, by instructors or assistants in medicine.

(2) *Didactic Teaching.* This will be given in the afternoon on special topics in medicine. These lectures will supplement to a considerable extent the specialized work given in the mornings between nine and ten. Other exercises will be devoted to case teaching, to demonstrations in gross pathology, given jointly by members of the pathological and medical departments, and to practical therapeutics.

(3) *Original Thesis.* Each student shall present before graduation an original thesis which will embody clinical, laboratory, statistical, or literary work. The subject of the thesis shall be approved, and the work done under the supervision of some member of the medical department selected by the student. The thesis shall be presented at a meeting of the class presided over by one of the younger members of the department selected by the professors. The member of the department under whose supervision the thesis of the afternoon has been prepared shall also be present.

(4) *Clinical Conference.* Each student will report and discuss one case at a meeting of the class, as heretofore.

II. *Theory and Practice.* The electives in medicine offered by the Department of Theory and Practice consist of

(a) Half-courses involving attendance at the Massachusetts General Hospital throughout the day for one month from November to May inclusive. It will be limited to classes of four students but may be repeated when possible.

(b) Research in the Laboratory of Clinical Pathology on the half-day or all-day plan, first half-year.

PEDIATRICS. Half-courses, all day, throughout the year.

The work will consist of clinical instruction of cases in the wards and out-patient departments of the Infants' Hospital, Children's Hospital and the Contagious wards of the South Department. Students will be assigned to the various wards and out-patient departments by the Professor of Pediatrics and will work under his supervision, and in so far as is practicable the work will be assigned in reference to their individual needs and wishes. The students may also attend the clinical lectures given by Dr. Rotch in the third year. The direction of the clinical work will be carried out by the other members of the department. One half of each section will work in the mornings in the out-patient department of the Children's Hospital and the other half in the out-patient department of the Infants' Hospital under the direction of a member of the department. The whole section will spend two afternoons a week at the South Depart-

ment under Dr. McCollom, and two afternoons in the medical wards of the Children's Hospital under the supervision of an instructor. Two clinical exercises on diseases of the ear in infants will be given each month through the courtesy of Dr. Crockett. The remaining time will be spent on reading in connection with some subject assigned to each student, and on which a written report will be required.

CLINICAL SURGICAL PATHOLOGY. Half-courses, forenoons, throughout the year.

The course will consist of a study of clinical cases with especial reference to the pathology of the lesions present and the use of the microscope in immediate diagnosis. The work will be supplemented with conferences and demonstrations in the Warren Museum.

SURGERY :—

(1) *Surgey.* Half-courses, all day, throughout the year.

The instruction will consist of ward work, the examination of cases, the recording of histories, the establishing of diagnoses, the etherization of patients, the dressing of injuries, wounds, and fractures, the close observation of operations, seeing the progress of a surgical patient, and the end results of cases. The out-patient work will consist of the establishing of diagnoses, the treatment of cases under direction, and the recording of histories. This work will be carried out at the hospitals, in the wards and out-patient departments, and will occupy a part of each day, and will be from time to time directed and supervised by instructors.

The afternoons will be devoted to library, museum, and literary work, surgical pathology, case teaching, regional surgery, and operative surgery. Seminars and conferences will be held as occasion requires. The student will be required to account for his daily work.

Any student who wishes information or advice regarding his course in surgery in the fourth year may apply to Dr. H. L. Burrell, 22 Newbury St., on any day except Saturday or Sunday, between 2 and 3 P.M.

(2) *Genito-Urinary Surgery.* Half-courses, forenoons, throughout the year.

The instruction will consist of ward and out-patient work, the taking of histories, the witnessing of and assisting at operations, the reporting of the progress of cases, and seeing the end results. Conferences with the student will be held from time to time.

(3) *Orthopedic Surgery.* Half-courses, afternoons, throughout the year.

The instruction will consist of ward and out-patient work, the taking of histories, the witnessing of and assisting at operations, the reporting of

the progress of cases, and seeing the end results. Conferences with the student will be held from time to time.

(4) *Surgical Pathology*. Half-courses, afternoons, throughout the year.

Students will be received in the surgical laboratory for the investigation of special subjects in the pathology of surgical diseases. The choice of subjects to be investigated may be made by the students, or the director of the laboratory will suggest the lines of investigation to be pursued. A considerable amount of fresh pathological material from surgical operations is received, and will be demonstrated to students who elect the course. The amount of material is sufficiently large to provide for numerous lines of investigation.

OBSTETRICS AND GYNAECOLOGY:—

(1) *Obstetrics*. Half-courses, all day, throughout the year.

The course will be given at the Boston Lying-in Hospital and at the Medical School. During the first half of the course the student will lodge at the Hospital, and devote his time chiefly to attendance on cases in the out-patient clinic; he will also be called upon to assist at operations, and, when his other duties permit, to make ward visits with the physician on duty. In the second half of the course he will conduct the convalescence of the cases delivered by him during his resident service, write full reports of his cases, and make daily ward visits, receiving clinical instruction on house patients, and witnessing operations. In his clinical work he will have the supervision and instruction of the Department and of the Hospital Staff on duty. In the second half of his course he will also be given, at the Medical School, a course of demonstrations in operative obstetrics, and each student will practise the various operations on the manikin.

(2) *Gynaecology*. Half-courses, forenoons, throughout the year.

The course will be given in the wards and out-patient department of the Gynaecological Service at the Boston City Hospital, which affords ample material for a comprehensive study of gynaecology, from the simpler lesions requiring only minor local treatment or the various plastic operations, to the major cases treated by capital operation. Students will be given opportunity to educate the touch, and will be instructed in diagnosis and in the methods of minor treatment. The various operations, major and minor, will be demonstrated, and opportunity given to study convalescence and post-operative treatment. Students will also be expected to study, and report on, pathological specimens removed by operation.

Cases will be assigned for history-taking, examination, diagnosis, with notes on operation and subsequent treatment. As far as possible students will be expected to assist in clinical work.

DERMATOLOGY AND SYPHILIS. Half-courses, forenoons, throughout the year.

Instruction in clinical dermatology will be given at the Massachusetts General Hospital, both in the out-patient department and in the ward for skin diseases. Instruction will also be given in the histology and pathology of the skin, with training in the preparation of microscopical preparations and in histological technique.

NEUROLOGY AND PSYCHIATRY. Half-courses, forenoons, throughout the year.

The instruction in neurology will be as follows:—

(1) Recording histories and making examinations of patients presenting themselves at the out-patient department of the Massachusetts General and Boston City Hospitals.

(2) Assisting in the treatment of such patients by electricity and otherwise.

(3) Reading specified articles with reference to subjects coming up for investigation.

(4) Making original investigations with regard to certain clinical points. For this purpose the patients presenting themselves at the out-patient department can be studied, and, to a limited degree, the patients in the medical and surgical wards of the hospital.

The instruction in psychiatry will be as follows:—

(1) A conference, one evening each week, for the review and further study of the cases seen at the clinics and of other cases, and for the discussion of special subjects.

(2) Clinical instruction at the McLean Hospital one forenoon in each week. This will include attendance at the regular conferences of the Medical Staff at which there is a careful discussion of every case on its admission to the Hospital, with the study of its history, diagnosis, prognosis, and treatment. This exercise will be followed by a visit to the wards and the examination, as far as practicable, of the cases discussed at the conferences and of other selected cases.

(3) Clinical instruction at the Boston Insane Hospital one forenoon in each week, including clinical demonstrations, and the individual study of especially assigned cases, which will also be reported and discussed at the regular evening conferences.

This course in psychiatry is open to a limited number of students, and may be taken independently of that in neurology. Several exercises will be held in common by those electing psychiatry and neuropathology.

OPHTHALMOLOGY. Half-courses, forenoons, second half-year.

The work will consist of personal instruction in the use of the ophthalmoscope and other instruments of precision. An opportunity will be given to work in the out-patient department of the Massachusetts Charitable Eye and Ear Infirmary and to observe and study cases in the wards. In addition there will be instruction in ophthalmic operations with opportunity to witness their exemplification in the operative work of the hospital.

OTOLOGY. Half-courses, forenoons, throughout the year.

For men who elect but one half-course, the work will consist chiefly of clinical training and instruction, hearing tests, and objective examinations and manipulations in the out-patient, house, and operating services of the Massachusetts Charitable Eye and Ear Infirmary.

For men especially interested in Otology, who wish to devote all their time to the subject, a thorough course of instruction has been planned embracing the anatomy, physiology, and pathology of the ear, nose, and nasopharynx in addition to thorough clinical instruction.

LARYNGOLOGY. Half-courses, forenoons, first half-year.

The course is held on alternate days at the Massachusetts General Hospital. One half of the morning will be given to work in the clinic, and the second half to systematic clinical instruction, operations, anatomy, pathology, and the literature of the subject.

EXAMINATIONS.

The final examination in every required subject is held at the close either of the first or of the second half of the school year. The examination, therefore, in every subject occurs once a year, but an opportunity to make up failures in examinations is offered at the opening of the school year. The *Mid-Year* and *June examinations* are only for those who are members of the School at the time, and for those entitled to apply for the degree. The *September examination* is only for those who have been examined previously and have failed in the subject of the examination, or for applicants for advanced standing. In some subjects a portion of the examination consists of practical work in the laboratory.

The exercises of the third year are omitted during the mid-year examinations.

The amount of time credited to each examination is as follows:—

First year.—Anatomy * (3 hrs.), Histology and Embryology * (3 hrs.), Physiology (3 hrs.), Biological Chemistry (3 hrs.).

* The examinations in these subjects are held at the end of the first half-year.

Second year.—Bacteriology* (1 hr.), Pathology* (2 hrs. written, 1 hr. practical), Hygiene (1 hr.).

Third year.—Materia Medica and Therapeutics* (2 hrs.), Theory and Practice* (3 hrs.), Clinical Medicine (3 hrs.), Pediatrics (2 hrs.), Surgery* (2 hrs. written, 1 hr. practical, as follows: Surgery, 15 min.; Orthopedic Surgery, 15 min.; Surgical Technique, 15 min.; Surgical Pathology, 15 min., taken in second year), Clinical Surgery (1 hr. written, 1 hr. practical, as follows: Clinical Surgery, 45 min.; Genito-Urinary Surgery, 15 min.), Obstetrics (3 hrs.), Gynaecology (1 hr.), Dermatology (1 hr.), Syphilis (1 hr.), Neurology (1 hr.), Psychiatry (1 hr.), Ophthalmology* (1 hr.), Otology (1 hr.), Laryngology (1 hr.).

Fourth year.—The nature of the examinations is determined by each department. The student's credit is based on his daily written record of work, on a practical or written examination at the end of each course, or on all combined.

In addition to the above examinations every student is required:—

To dissect the three parts of the body to the satisfaction of the demonstrator;

To receive practical instruction in anesthesia;

To present a certificate that he has satisfactorily served as a surgical dresser in the surgical out-patient department of the Massachusetts General Hospital or Boston City Hospital for at least one month after taking the course in surgical technique in the second half of the second year;

To take charge of and report on six cases in Obstetrics, and to receive instruction on at least one of them;

To furnish satisfactory evidence of having engaged in the practical exercises in Theory and Practice.

No student is allowed to anticipate the examinations in the regular course of studies of his year, except by special permission of the Faculty.

After two failures to pass in any subject, a student must give notice twenty-four hours in advance, at the Dean's office, of his intention to take each subsequent examination in that subject, and pay a charge of three dollars.

DEGREES.

DEGREE OF DOCTOR OF MEDICINE.

Every candidate for the degree of Doctor of Medicine at this University must be at least twenty-one years of age, and of good moral character. He must fulfil all the requirements for admission to this Medical School; must give evidence of having studied in a recognized Medical School at

* The examinations in these subjects are held at the end of the first half-year.

least four full years, of which one year must be spent at this School; must pass all required examinations, and fulfil satisfactorily the special requirements enumerated above.

The degree of Doctor of Medicine will be given to those candidates who fulfil the above requirements. The degree of Doctor of Medicine *cum laude* will be given to candidates who have obtained an average of eighty per cent., or over, in all the required examinations.

Candidates for the degree must make application for it in writing, on blanks furnished at the Dean's office, on or before May 1 of the year in which they intend to graduate.

Candidates for the degree of Doctor of Medicine are not required to present a thesis; but they may present a voluntary thesis which, if of conspicuous merit, may receive honorable mention; if the thesis is also of a suitable character, it may be read at the Commencement exercises. Theses must be completed and delivered to the Dean on or before the first day of June.

A graduate of another medical school of recognized standing may obtain the degree of Doctor of Medicine at this University by fulfilling all the requirements for undergraduates above mentioned; but he may take the examination in any subject only at the times when regularly it is held, that is, in September, at the mid-year, or in June.

DEGREE OF MASTER OF ARTS.

The degree of MASTER OF ARTS is open to graduates of the Harvard Medical School who are also Bachelors of Arts of Harvard College, and to Bachelors of Arts of other Colleges who shall be recommended by the Faculty of Arts and Sciences of Harvard College. Candidates must pursue an approved course of study in Medicine for at least one year after taking the degree of Doctor of Medicine. Applications for approval of the course of study offered for this degree must be made to the Administrative Board of the Graduate School of Arts and Sciences on or before the *thirtieth day of April*. It is advisable to apply to the Board *early in the year*.

FEEES AND EXPENSES.

The fees are:—For matriculation, *five dollars*; for instruction, *two hundred dollars* for each year (if in two payments, at the first, one hundred and twenty dollars; at the second, eighty dollars); for a half-year alone, *one hundred and twenty dollars*. During the first year there are the following additional expenses: two dollars for each of the three parts required for dissection; two dollars for laboratory materials in Histology; three dollars for physiological material; and a maximum of ten dollars a year for chemical material, in addition to the charge

for breakage of glass apparatus. Students are required to deposit with the Bursar* six dollars to cover Anatomy charges, two dollars for Histology, and twenty dollars for Chemistry and Physiology. The balances of these deposits are returnable at the end of the year. In the second year three dollars will be charged for the course in Surgical Technique. In the fourth year a charge of three dollars is made for material used in the course in Operative Surgery. A deposit of two dollars with the Dean will entitle a student to the use of a locker in the School buildings. A student who wishes to rent a microscope of the School can do so upon payment of three to six dollars a half-year.

Not later than October 10 in each academic year, any student may pay to the Bursar the sum of four dollars for the maintenance of the Stillman Infirmary; and, on the order of a physician, every student who has taken advantage of this opportunity will be given, in case of sickness, in return for the fee, a bed in a ward, board, and ordinary nursing for a period not exceeding two weeks in any one academic year.

Payment of Fees.

Each first-year student is required to pay to the Bursar punctually at the beginning of the academic year, without the presentation of a bill, the sum of *one hundred and fifty-three dollars*; and *all other students* are required to pay, in the same manner, the sum of *one hundred and twenty dollars*. Fourth-year students electing Surgery are required to pay a charge of three dollars for material in Operative Surgery. The remainder of the tuition fee — *eighty dollars* each for all students — must be paid to the Bursar on or before January 31. No degree can be conferred until all dues to the University have been discharged. Each student whose dues remain unpaid on the day fixed for their payment is required at once to cease attending lectures and using laboratories or making use of any other privileges as a student until his financial relations with the University have been arranged satisfactorily to the Bursar. Failure to comply with this rule is deemed cause for final separation from the University.

Every student is required to file with the Bursar on his entrance to the School a bond of *fifty dollars*, executed by two sufficient bondsmen (one of whom must be a citizen of the United States), or to deposit fifty dollars in money, to cover the loss or injury of any property belonging to the University, or for which it is responsible. Blank forms of bonds may be obtained from the Secretary of the Faculty or from the Bursar. No officer or student of the University is accepted as a bondsman. Students

* The Bursar's office is in Dane Hall, Harvard Sq., Cambridge. Hours 9-1.

will be held responsible for the payment of fees until they have notified the Dean, in writing, of their intention to withdraw from the School.

Whenever a student is obliged to withdraw from the School before the last four weeks of a half-year for no misdemeanor, but for good and sufficient reason, to be determined in all cases by the Administrative Board, it shall be recommended that he be entitled to a remission of three-fourths of the amount due for that portion of the time during which he receives no instruction. This remission will date from the reception by the Dean of a written notice of the student's withdrawal from the School. No degree will be conferred till all dues to the School are discharged.

The student's general expenses may be reduced, in accordance with his means, to the standard which prevails in other cities. A list of boarding places at various prices can be obtained at the rooms of the Young Men's Christian Association, corner of Berkeley and Boylston Streets, and the rooms of the Young Men's Christian Union, No. 48 Boylston Street, Boston.

CLINICAL ADVANTAGES.

The Medical Department of the University is established in Boston, in order to secure for Anatomy, Pathology, and the various Clinical Subjects those advantages which are found only in large cities.

There are Hospital visits or operations daily.

The Massachusetts General Hospital. — During the past year, more than five thousand patients were treated in the wards, and over thirty thousand in the out-patient departments. Patients are received from all parts of the United States and the Provinces, and are visited by the students, with the attending physicians and surgeons, on four days in the week. Operations are numerous, and are performed in the amphitheatre, which is provided with seats for 400 persons. Clinics in the following special branches have been established in connection with the out-patient department: Dermatology, Laryngology, Diseases of the Nervous System, and Ophthalmology. The Dalton scholarship of \$500 is open to the house pupils.

The Boston City Hospital. — During the past year, about nine thousand cases were treated in its wards, and twenty-two thousand in its various out-patient departments. The medical wards always contain many cases of acute diseases, and changes are taking place constantly. The opportunities for seeing fractures, injuries, and traumatic cases of all kinds are excellent, since, on an average, eight hundred street accidents are treated yearly. Surgical operations are performed in the amphitheatre. There are special services for diseases of women, of the eye, the ear, the skin, and the nose and throat. Diseases of women and of the nervous system are also largely treated in the out-patient department. Clinical

instruction is given by the physicians and surgeons two or more times a week.

In these two hospitals the facilities for witnessing Operative Surgery are unsurpassed. Twice a week operations are performed in the presence of the class. The number of these operations is large, reaching nearly two thousand a year. The variety is great, embracing every surgical disease and injury, including the surgical operations on the eye and ear.

The Boston Lying-in Hospital.—More than six hundred patients were confined during the last year in the Hospital. In the out-patient department over sixteen hundred cases were attended by the hospital Externes, who are appointed from the third and fourth year students. Clinical instruction is given in these cases by the physicians to out-patients and by the house physicians.

The Boston Dispensary.—More than forty thousand patients were treated at this public charity during the past year. Students have ample and excellent opportunity for seeing practical work in the diagnosis and treatment of cases illustrating the various branches of Medicine and Surgery.

The Infants' Hospital.—The wards of the Hospital are devoted entirely to children under two years of age. About three thousand children of all ages are treated annually in the out-patient department. The material of the Hospital is used throughout the year for teaching both students and graduates.

Children's Hospital.—During the past year more than seven hundred cases were treated in the wards and about seventy-six hundred in the out-patient departments. Instruction in orthopedic surgery and in the general diseases of children is given by members of the hospital staff.

The McLean Hospital.—During the past year two hundred and five patients, received from all parts of the country, were under treatment. Advanced methods of treatment are employed, including physical exercise, massage, hydrotherapy, etc., applied by persons expert in these methods. In the laboratories, —pathological, chemical, and physiological, with psychological methods, —work is carried on in immediate connection with the clinical studies and treatment of cases. There is a good special library of works in psychiatry and neurology, and a large list of American and foreign journals available for study. Clinical conferences are regularly held by the Medical Staff for the discussion of all cases admitted, including a study of the history, diagnosis, prognosis, and treatment of each case. These exercises and clinical demonstrations in the wards are available for a limited number of students.

The Boston Insane Hospital.—During the past year one thousand and eighty-seven patients were under treatment. Clinical instruction is given here in general clinics to medical students, and there are in addition facili-

ties for the special study of cases by students taking elective courses. Emergency cases are received; the whole number of patients admitted last year was four hundred and sixteen, including many instructive examples of the various forms of mental disease.

The Massachusetts Charitable Eye and Ear Infirmary.—Over thirty thousand patients were treated at this institution during the past year. These cases present every variety of disease of the ear and eye, and supply a large number of operations. A new and enlarged hospital, considered to be one of the best of its kind in the world, has been erected on land adjoining the Massachusetts General Hospital. It is believed that this building will provide adequately for the proper treatment of the constantly increasing number of patients.

Long Island Hospital, Boston Harbor.—This Hospital is designed particularly for the treatment of chronic diseases. It has two hundred and fifty beds, with an average daily number of patients of about two hundred and thirty. It has marked advantages for the study of syphilis, tuberculosis, diseases of the nervous system, and chronic diseases of the heart and of the kidneys. The number of autopsies is annually about 50 per cent. of the deaths, a fact which affords an unusual opportunity for the study of pathological anatomy. The material in the Hospital is used for clinical instruction by the members of the Visiting Staff.

Students are also permitted to visit the Free Hospital for Women and the Carney Hospital on application to the physicians on duty.

There are more than sixty appointments annually for Internes in the various hospitals, and nearly as many more for Assistants in the out-patient departments. Appointments for the Massachusetts General and Boston City Hospitals are for terms of one to two years (according to the service chosen); for the Boston Lying-in Hospital for six months; and for the Free Hospital for Women for nine months.

WARREN ANATOMICAL MUSEUM.

The Warren Anatomical Museum was founded in 1847 by JOHN COLLINS WARREN, of the College Class of 1797, Adjunct Professor of Anatomy and Surgery from 1809 to 1815, Hersey Professor of Anatomy and Surgery from 1815 to 1847, Professor *Emeritus* from 1847 to his death in 1856, son to JOHN WARREN, the first Hersey Professor of Anatomy and Surgery. This important Museum is open to students in the School, and its collections are used in demonstration of the lectures. It occupies the upper three floors of the Administration Building. Its Curator is Dr. WILLIAM FISKE WHITNEY.

The collection has about nine thousand specimens, illustrating both normal and pathological anatomy and materia medica. Students may have access to these specimens at any time upon application to the Curator.

Besides dissections and serial sections of many bones, the anatomical collection includes many corrosion preparations, plaster and papier maché models of bones, organs, and various parts of the body, and frozen sections.

The pathological collection is being constantly enlarged by the addition of numerous specimens, preserved in their natural colors by Kaiserling's method.

LIBRARIES.

Medical School students who are engaged in research work have access to the special libraries of the various departments on application to the persons in charge.

The College Library at Cambridge is open to the students of this School.

The Boston Public Library, which contains a large collection of medical books, is open to students who are inhabitants of Boston. Students, not inhabitants of Boston, who have filed a bond at the Bursar's office, or deposited with the Bursar the sum of fifty dollars, may also use this library. The Bursar will furnish on application the necessary certificate of bond or deposit.

The Boston Medical Library has nearly 35,000 volumes, about half of which are periodicals, and 30,000 pamphlets. Nearly 500 current journals and transactions are on file. There is a good reference library of modern books, including encyclopaedias, systems, etc. The Library is open daily, except Sundays and holidays, from 9 A.M. to 6 P.M. It is also open Tuesday and Friday evenings from 7 to 10, except during July and August. It has always been free to medical students.

FELLOWSHIPS AND SCHOLARSHIPS.

FELLOWSHIPS.

BULLARD FELLOWSHIPS. In 1891, WILLIAM STORY BULLARD, of Boston, gave the sum of fifteen thousand dollars for the establishment of three fellowships of five thousand dollars each "in memory of three physicians who were distinguished for their honorable personal character and for their professional services in this community." Accordingly the three following fellowships were established with a yearly income of two hundred and twenty-five dollars each:—

THE GEORGE CHEYNE SHATTUCK MEMORIAL FELLOWSHIP.

THE JOHN WARE MEMORIAL FELLOWSHIP.

THE CHARLES ELIOT WARE MEMORIAL FELLOWSHIP.

The income from any one or all of these fellowships may be paid to any student or member of the medical profession who shall be selected by the Administrative Board of the Medical School to make such original

investigations in Medical Science as in their opinion will be most useful to the profession and to the community. The results of such investigations shall not, however, be published as a research performed under the grant of a Bullard Fellowship, unless the work shall have received the approval of the Committee. If published with the approval of the Committee, mention shall be made of the fact that the work was done under a Bullard Fellowship.

Holders of Bullard Fellowships are required to do an amount of work equivalent to not less than ten hours a week throughout the academic year and to present to the Committee at the end of the academic year a report on the amount and result of the work performed.

Applications for the Bullard Fellowships must be handed to the Dean on or before October 1.

AUSTIN FELLOWSHIPS. In 1900, four teaching fellowships, of five hundred dollars each, were established from the income of the Austin Fund.

PROCTOR FUND. A bequest of fifty thousand dollars by Ellen Osborne Proctor for the purpose of promoting the study of chronic diseases. The income of this fund is to be devoted to the care in hospital of persons afflicted with chronic disease, and to investigations into the nature and treatment of the same. The special disposition of the income of this fund is under the control of the heads of the departments of Theory and Practice of Physic, Clinical Medicine, and Pathology.

SCHOLARSHIPS.

The Cheever Scholarship is awarded to a student of the first-year class. The Hayden Scholarship may be so awarded. All the other Scholarships are awarded to members of the three upper classes.

BARRINGER SCHOLARSHIPS. Two, known as the Edward M. Barringer Scholarship No. 1, and the Edward M. Barringer Scholarship No. 2, and having a yearly income of three hundred dollars and two hundred dollars respectively, from a bequest of Edward M. Barringer, will be awarded to deserving students, preferably those of the fourth class.

DAVID WILLIAMS CHEEVER SCHOLARSHIP, with an income of two hundred and fifty dollars, was founded in 1889 by David Williams Cheever, M.D., LL.D., of Boston, of the Class of 1852. It is to be awarded to a poor and meritorious student of the first year, after three months' probation in the Medical School.

ISAAC SWEETSER SCHOLARSHIP was founded in 1892 by Mrs. Anne M. Sweetser. The income of two hundred and fifty dollars is to be "devoted to the aid of poor students of ability who would not otherwise be able to continue the studies necessary for their profession."

CLAUDIUS M. JONES SCHOLARSHIP, with an income of two hundred and fifty dollars, is from a bequest of six thousand dollars by Claudius Marcellus Jones, of the Class of 1866, M.D. 1875.

ORLANDO W. DOE SCHOLARSHIP. The bequest of ORLANDO WITHER-
SPOON DOE (A.B. 1865, M.D. 1869) was five thousand dollars. One half of the income derived therefrom, amounting to one hundred dollars, "is to be given annually as a scholarship to a deserving student in the Medical department."

CHARLES PRATT STRONG SCHOLARSHIP, with an income of one hundred dollars, was founded in 1894 by friends and patients of the late Charles Pratt Strong, of the Class of 1876, M.D. 1881.

THE LEWIS AND HARRIET HAYDEN SCHOLARSHIP for colored students was founded in 1894 from a bequest of Mrs. Harriet Hayden. The income is two hundred and twenty-five dollars..

ALFRED HOSMER LINDER SCHOLARSHIP, with an income of two hundred dollars, was founded in 1895 by Mrs. George Linder. It is to be awarded to a needy student who shall have proven himself to be of sound principles and marked ability.

JOSEPH EVELETH SCHOLARSHIPS. Three Scholarships with an annual income of two hundred dollars each. Founded from the residuary bequest of thirty-seven thousand eight hundred and ninety-seven dollars and fourteen cents, made by Joseph Eveleth, of Boston, "for aiding deserving and indigent young men in obtaining an education in said College or any of the schools connected therewith." Three Scholarships on this foundation have been assigned to the Harvard Medical School.

EDWARD WIGGLESWORTH SCHOLARSHIP, with an income of two hundred dollars, was founded in 1897 by the family of the late Edward Wigglesworth, of the Class of 1861, M.D. 1865, the yearly income of the fund to be paid to such needy and deserving students of the Medical School as the Medical Faculty shall annually recommend.

HILTON SCHOLARSHIPS. Two Scholarships, with an income of two hundred and twenty-five dollars each, were founded in 1897 from a bequest of William Hilton.

CHARLES B. PORTER SCHOLARSHIP, with an income of two hundred and twenty-five dollars, was founded in 1897 from a bequest of five thousand dollars by William L. Chase.

THE JOHN THOMSON TAYLOR SCHOLARSHIP, with an income of two hundred dollars, was founded in 1899 by Mrs. Frederic D. Philip in memory of her brother, John Thomson Taylor, who died in 1889. He was a student of the Medical School from 1887 to 1889.

LUCIUS F. BILLINGS SCHOLARSHIP, with an income of two hundred dollars, was founded in 1900 from a bequest under the will of Lucius F. Billings.

THE JOSEPH PEARSON OLIVER SCHOLARSHIP, with an income of three hundred and twenty-five dollars, was founded in 1904 by patients of the late Joseph Pearson Oliver, M.D. (Harvard, 1871), to be awarded "to such needy and deserving student of the Medical School as the Administrative Board shall annually recommend."

A fund of five thousand dollars, the gift of an unknown donor, was established in 1905, the income of which shall be payable every year to such meritorious and needy students in the Harvard Medical School as shall be recommended by the Administrative Board of the School.

COTTING GIFT. The income of a fund received from the late Dr. Benjamin E. Cotting will be given to such medical student or students as the Medical Faculty may select, having regard to the pecuniary needs, intellectual capacity, faithfulness and earnest endeavor, rather than to highest scholarship merely. The amount to be awarded annually will be one hundred and twenty-five dollars.

The income of the JOHN FOSTER FUND, amounting to about one hundred and fifty dollars, is payable every other year to one or more meritorious students needing assistance. The next payment will be made in 1906.

These scholarships and gratuities are awarded to such men among those applying for and needing assistance as give evidence of having done the best work either in this School or in a preparatory course elsewhere.

Students who have not been able to obtain scholarships often find time and opportunity to do outside work of various kinds in the city.

All applications for scholarships or pecuniary aid, except for the Cheever and Hayden Scholarships, must be handed to the Dean on or before *June 1*.

Applications for the Cheever and Hayden Scholarships must be handed to the Dean on or before *November 30*. These scholarships are open only to students who are members of the school at the time of application.

Blank forms, on which all applications for pecuniary aid must be made, may be obtained of the Dean.

PRIZES

Boylston Medical Prizes.—These prizes, which are *open to public competition*, are offered annually for the best dissertations on questions in medical science proposed by the Boylston Medical Committee.

At the annual meeting held in Boston in 1906 no prizes were awarded.

For 1907 two prizes are offered : —

1. A prize of seventy-five dollars for the best dissertation on *The results of Original Work in Anatomy, Physiology, or Physiological Chemistry*. The subject to be chosen by the writer.

2. A prize of seventy-five dollars for the best dissertation on *The results of Original Investigations in Pathology, Bacteriology, Therapeutics, or Pharmacology*. The subject to be chosen by the writer.

Dissertations on these subjects must be sent post-paid to H. C. ERNST, M.D., Harvard Medical School, Boston, Mass., on or before *January 1, 1907*.

For 1908 two prizes are offered : —

1. A prize of seventy-five dollars for the best dissertation on *The results of Original Work in Anatomy, Physiology, or Physiological Chemistry*. The subject to be chosen by the writer.

2. A prize of seventy-five dollars for the best dissertation on *The results of Original Investigations in Pathology, Bacteriology, Therapeutics, or Pharmacology*. The subject to be chosen by the writer.

Dissertations on these subjects must be sent to the same address as above on or before *January 1, 1908*.

In awarding these prizes preference will be given to dissertations which exhibit original work, but if no dissertation is considered worthy of a prize, the award may be withheld.

Each dissertation must bear in place of its author's name some sentence or device, and must be accompanied by a sealed packet bearing the same sentence or device, and containing within the author's name and residence. *Any clew by which the authorship of a dissertation is made known to the Committee will debar such dissertation from competition.*

Dissertations must be printed or typewritten, and their pages must be bound in book form.

All unsuccessful dissertations are deposited with the Secretary, from whom they may be obtained, with the sealed packet unopened, if called for within one year after they have been received.

By an order adopted in 1826, the Secretary was directed to publish annually the following votes : —

1. That the Board do not consider themselves as approving the doctrines contained in any of the dissertations to which premiums may be adjudged.

2. That in case of publication of a successful dissertation, the author be considered as bound to print the above vote in connection therewith.

The Boylston Medical Committee is appointed by the President and Fellows, and consists of the following physicians : WILLIAM F. WHITNEY,

M.D., *President*; HAROLD C. ERNST, M.D., *Secretary*; FRANZ PFAFF, M.D., THEOBALD SMITH, M.D., WILLIAM T. PORTER, M.D., FRANKLIN DEXTER, M.D., EDWARD H. NICHOLS, M.D.

The address of the *Secretary* of the Boylston Medical Committee is HAROLD C. ERNST, M.D., Harvard Medical School, Boston, Mass.

William H. Thorndike Prize. — A prize of two hundred dollars will be given annually to the author of the best essay on some subject in any branch of Surgery.

The students of the Harvard Medical School and graduates of under five years' standing of any recognized medical school are eligible in competition for this prize.

Each essay must bear in place of its author's name some sentence or device, and must be accompanied by a sealed packet bearing the same sentence or device, and containing within the author's name and residence. If the author is a graduate, it must also contain the date of his graduation in medicine and the medical school from which he was graduated. Any clew by which the authorship of an essay is made known to the judges will debar such essay from the competition.

The essays must be sent to the Dean of the Harvard Medical School, Longwood Avenue, Boston, Mass., U. S. America, on or before November 1 of each year, and the award will be made annually on December 24. If no essay is considered worthy of a prize, no award will be made.

Otological Prize. — For the best preparation illustrating the osseous anatomy of the ear or for the best thesis showing original work on an otological subject, a prize of twenty-five dollars is offered, open to fourth-year students.

Other Prizes. — The Bowdoin, Dante, Toppan and Sumner Prizes, offered by the Faculty of Arts and Sciences, are open to students in all departments of the University. Full particulars in regard to these prizes may be found in the University Catalogue.

COURSES FOR SPECIAL STUDENTS.

All courses, including laboratory courses, in the Harvard Medical School are open to persons not candidates for the degree of Doctor of Medicine; that is to say, to special students and to students in other Departments of the University. In order to be admitted to a course, the applicant must satisfy the head of the Department concerned of his fitness to pursue the work.

In addition, certain Departments offer courses, not a part of the regular curriculum, but specifically designed for special students; as follows:—

ANATOMY. Professor DWIGHT, Dr. J. WARREN, and Assistants.

(1) Course for artists, teachers, and others. (Essentially the regular first-year course with dissection.)

(2) Special instruction and opportunities for research.

PHYSIOLOGY. Assistant Professor CANNON.

Physiological Research.

COMPARATIVE PHYSIOLOGY. Associate Professor PORTER.

Physiological Research.

PHARMACOLOGY. Professor PFAFF and Dr. TYRODE.

Pharmacological Research.

BACTERIOLOGY. Professor ERNST and Drs. PAGE and FROTHINGHAM.

(1) Elementary courses beginning at other times than October 1 and February 1, for groups of not fewer than four students.

(2) Advanced instruction to groups of not fewer than four students.

(3) Research course for advanced students. Desks will be assigned at any time.

CLINICAL PATHOLOGY. Dr. WRIGHT.

(1) Research in bacteriology and pathology.

(2) Instruction in bacteriological and pathological technique and in diagnosis by laboratory methods.

(3) Weekly demonstrations in pathological anatomy in conjunction with Dr. RICHARD C. CABOT, who will discuss the clinical aspects of the cases.

COMPARATIVE PATHOLOGY. Professor THEOBALD SMITH.

Research. Pathogenic micro-organisms of animal life.

HYGIENE. Professor HARRINGTON and Dr. MAGRATH.

(1) Analysis of water and sewage.

(2) Analysis of foods and the detection of adulterants.

(3) Analysis of air and soils.

(4) Inspection of meats and other foods.

(5) Examination of disinfectants.

(6) Research.

HOURS AND FEES.

Applicants for the above courses should make arrangements as to time and fees with the respective heads of departments. They should then register and pay their fees at the Dean's office.

COURSES OF STUDY FOR GRADUATES.

The Faculty has arranged, for graduates of recognized medical schools, an improved plan of instruction, embracing nearly all the branches of practical and scientific medicine. It is designed to supply good opportunities for clinical and laboratory study.

The laboratories of the School are well equipped for practical work, and the clinical advantages offered by the hospitals of Boston furnish abundant material for all purposes of instruction. The following are the principal institutions :—

Massachusetts General Hospital,	Infants' Hospital,
Boston City Hospital,	Children's Hospital,
Boston Dispensary,	McLean Hospital (for the Insane),
Massachusetts Eye and Ear Infirmary,	Boston Insane Hospital,
Boston Lying-in Hospital,	Carney Hospital.

Instructors in the Medical School are members of the medical and surgical staffs of these institutions, to all of which students are admitted under their immediate supervision.

Instruction in the graduate courses is, with but few exceptions, entirely distinct from that of the undergraduate department of the School; but students of the former are admitted also to all the regular lectures (not clinical) of the latter, without extra charge, during their connection with the School.

Instruction is conducted in small classes and under the personal direction of the heads of departments.

Instruction is given throughout the academic year, October to June.

FEES.

The fees for the separate courses in the several departments vary from \$5 to \$125.

An extra fee is required for the use of material in laboratory, dissecting, and operative courses.

Graduates seeking admission to any of the graduate courses must first register their names at the Dean's office at the Medical School, where all fees are payable, and obtain a receipt to be shown at the first exercise.

For further information and full description of the courses and lectures for graduates, address Dr. WILLIAM L. RICHARDSON, *Dean*, Harvard Medical School, Longwood Avenue, Boston, Mass.

SUMMER COURSES OF INSTRUCTION.

During the summer of 1907, courses in many branches of practical and scientific medicine will be given by teachers in the School. These courses will be clinical in character and will be given at the Hospitals and Dispensaries by the physicians and surgeons on duty. Practical instruction will also be given in several of the Laboratories of the School by the instructors in charge. These courses are open only to graduate and undergraduate students of medical schools recognized by the Faculty of Medicine, and to such others as the Dean of the Faculty approves.

A list of the Summer Courses will be announced early in the Spring. For further information address Dr. WILLIAM L. RICHARDSON, *Dean*, Harvard Medical School, Longwood Avenue, Boston, Mass.

The following are the Courses provided in the Graduate Department for 1906-07.

SUBJECT.	INSTRUCTOR.	PLACE.	No. of Exer- cises.	TIME.*	FEE.
1. Special Anatom. Instruction	Prof. Dwight	Medical School	..	Special	Special.
2. Anatomy of the Joints	Prof. Dwight	"	12	Special	\$25.
3. Topographical and Applied Anatomy	Prof. Dwight	"	12	Special	25.
4. Dissection Courses	Dr. J. Warren	"	..	After Nov. 1	20.
5. Anatomy of Nose and Throat	Dr. Mosher	"	12	Special	25.
6. Genito-Urinary Anatomy, Male	Dr. Davis	"	5	After Feb. 1	25.
7. Genito-Urinary Anatomy, Female	Dr. Wadsworth	"	5	After Feb. 1	20.
8. Surgical Anatomy of Abdomen	Dr. Cheever	"	6-8	Feb., Mar.	25.
9. Elementary Embryology	Profs. Minot and Lewis, and Dr. Bremer	"	43	Feb., Mar.	30.
10. Pre-research Embryology		"	43	Apr., May	30.
11. Histology	Profs. W. T. Porter and Cannon	"	43	Apr., May	Special.
112. Special Physiological Instruction		"	..	Special	Special.
113. Research in Physiology	Profs. W. T. Porter and Cannon	"	..	Special	Special.
114. Advanced Biological Chemistry	Drs. Alsberg and Henderson	"	..	Special	Special.
115. Technique of Metabolism Investiga- tion	Drs. Alsberg and Henderson	"	..	Special	Special.
116. Research in Biological Chemistry	Drs. Alsberg and Henderson	"	..	Special	Special.
117. Physical Chemistry in Med. Science	Dr. Henderson	"	24	Special	Special.
118. Normal and Path. Metabolism	Dr. Alsberg	"	24	Nov., Dec.	Special.
119. Research and General Laboratory Work in Bacteriology	Prof. Ernst	"	..	Special	25.
20. Research and General Laboratory Work in Pathology	Profs. Councilman and Mallory, and Dr. Wright	Med. Sch., Boston City & { Mass. General Hospitals }	..	Special	Special.
21. Neuropathology	Prof. Southard	Danvers Insane Hospital	25	Oct.—June	25.
222. Research in Comparative Pathology	Prof. Smith	Bussey Institution	..	Special	Special.
223. Hygiene, general	Prof. Harrington	Medical School	..	Special	35.
224. Hygiene, special courses	Prof. Pfaff and Dr. Tyrode	"	..	Special	20.
225. Research in Pharmacology	Dr. A. K. Stone	"	..	Special	Special.
226. Clinical Medicine		Mass. General Hospital	20	Oct. & ½ Nov.	25.
227. Clinical Medicine	Dr. Jackson	"	18	Jan.	15.
228. Clinical Medicine, 2 courses	Dr. Robey	Boston City Hospital	24	Feb.—May	20.
229. Clinical Medicine, 2 courses	Dr. Locke	"	24	Nov., Dec.	25.
230. Clinical Medicine	Dr. Pratt	Mass. General Hospital	24	Feb.	25.
231. Clinical Medicine, 3 courses	Dr. F. W. White	Boston City Hospital	24	Nov., Dec., Jan.	30.

†32. Physical Diagnosis	Dr. Lord	Mass. General Hospital	27	Oct. and special.	25.
†33. Diseases of the Lungs, 2 courses	Dr. Stone	" "	12	Dec., Jan.	25.
†34. Diseases of the Myocardium, 2 courses	Dr. Stone	" "	12	Dec., Jan.	25.
†35. Digestive Diseases	Dr. Hewes	" "	12	Oct.—Dec.	25.
†36. Digestive Diseases, 3 courses	Dr. White	Boston City Hospital	20	Nov., Dec., Jan.	15.
†37. Laboratory Methods	Dr. Hewes	Mass. Gen. Hosp. & Med. Sch.	"	Oct.—Dec.	30.
†38. Clinical Pathology	Dr. Pratt	Med. Sch. & Hospital Labs.	"	Special	Special.
†39. Medical Research	Dr. Pratt	" "	"	Oct.—Jan.	Special.
40. Research and special work in Surg.	Address Prof. Burrell	" "	"	Special	25.
41. Major Surgery	Drs. Harrington and Codman	Mass. General Hospital	9	Oct.—Jan.	25.
42. Major Surgery, 6 courses	Dr. J. B. Blake	Boston City Hospital	20	Jan.—Ap.—Ju. Ju. Sep.	25.
43. General Surgery	Drs. Munro and Bottomley	Carney Hospital	24	Throughout year	25.
44. Abdominal Surgery	Dr. Lund	Boston City Hospital	24	Oct.—Jan.	25.
45. Clinical and Operative Surgery, 2 courses	Dr. F. Cobb	Mass. General Hospital	52	Oct., Nov., Dec., Jan.	25.
46. Diagnosis and After-Treatment of Surgical Diseases, 4 courses	Dr. C. A. Porter	" "	20	Feb.—May	25.
47. Surgery of the Joints	Dr. Codman	" "	24	Dec.	25.
48. Fractures and Dislocations, 5 courses	Dr. Crandon	Boston City Hospital	12	Oct., Nov., Apr., June	25.
49. Diseases of Rectum and Anus	Dr. Faulkner	" "	12	Sept.—Feb.	25.
50. Minor Surgery, 2 courses	Dr. Jones	Mass. General Hospital	24	Oct.—Jan.	25.
51. Operative Out-Patient Surgery, 3 courses	Dr. Crandon	Boston City Hospital	24	Sept., Jan., Dec.	25.
52. General Surgery of Children, 8 courses	Prof. Burrell, Drs. H. W. Cushing and J. S. Stone	Children's Hospital	30	Oct.—May	25.
†53. Diagnostic Röntgen Radiology, 8 courses	Dr. Brown	Long Island Hospital	12	Oct.—May	25.
†54. Röntgen Therapeutics	Dr. Brown	Instructor's Laboratory	16	Special	25.
†55. Theory and Practice of the Röntgen Ray, 8 courses	Dr. Brown	" "	15	Oct.—May	25.
56. Major Oper. Technique on Animals	Dr. Cheever	Special	"	Special	25.
57. Administration of Anæsthetics	Dr. Allen	Mass. General Hospital	10	Nov.	25.
58. Genito-Urinary Surgery, 2 courses	Dr. Watson	Boston City Hospital	15	Oct.—Dec.	25.
59. Genito-Urinary Surgery, 4 courses	Dr. Hubbard	" "	24	Nov.—Feb.	25.
60. Genito-Urinary Surgery, 2 courses	Dr. Paul Thordike	" "	24	Feb.—May	25.
61. Surgical Pathology	Dr. Nichols	Medical School	24	Special	25.
62. General Orthopedic Surgery, 4 courses	Prof. Bradford, Drs. Lovett, Brackett, Thordike, Soutter, and Adams	Children's Hospital	64	Oct.—May	25.

* Time includes months named. When time and fee are "special," arrangements must be made with the instructor.

† Women admitted.

‡ Women admitted conditionally.

SUBJECT.	INSTRUCTOR.	PLACE.	No. of Exer- cises	TIME.*	FEE.
63. Research and Special Work in Orthopedic Surgery	Address Prof. Bradford Dr. Lovett	Children's Hospital	8	Mar.—May	25.
64. Orthopedic Surgery, 2 courses	Dr. A. Thornlike	"	12	Oct.—Dec.	25.
65. Potts Disease, 2 courses					
66. Flat Foot and Lateral Curvature, 2 courses	Dr. Soutter	"	18	Jan.—Mar.	25.
67. Orthopedic Surgery, 2 courses	Dr. Brackett	"	12	Oct.—Dec.	25.
68. Deformities, 2 courses	Drs. Brackett and Adams	"	12	Jan.—Mar.	25.
69. Lateral Curvature, 2 courses	Dr. Lovett	"	24	Oct.—Dec.	25.
70. Lateral Curvature, 2 courses	Dr. Brackett	"	24	Mar.—May	25.
71. Orthopedic Surgery	Dr. Goldthwait	Mass. General Hospital	..	Special	25.
72. Deformities	Dr. Osgood	"	..	Special	25.
73. Clinical Obstetrics, 8 courses	The Department Staff	Boston Lying-in Hospital	26	Oct.—May	25.
74. Clinical Obstetrics, 8 courses	Address Prof. C. M. Green	"	..	Special	25.
75. Operative Obstetrics, 8 courses	The Department Staff	Medical School	5	Oct.—May	25.
76. Clinical and Operative Obstetrics	Address Prof. C. M. Green	Boston Lying-in Hosp. and } Medical School	..	Oct.—May	25.
77. A Gynaecology, 8 courses B Gynaecology, out-patient, 8 courses	Prof. C. M. Green, Drs. Newell, Young, Friedman and Mason	Boston City Hospital	26	Oct.—May	25.
78. Gynaecology	Dr. Storer	"	12	Oct.—May	25.
79. Gynaecology	Dr. Storer	Boston Dispensary	12	June	25.
80. Operative Gynaecology	Dr. Storer	St. Elizabeth's Hospital	15	Oct.—Dec.	25.
81. Pediatrics, 8 courses	Prof. Rotch, McCollum and Norse, Drs. Craigib, Ladd, and Dunn	Carney Hospital	26	Jan., Mar.	25.
82. Dermatology, 4 courses	Prof. Bowen, Drs. White, Towle and Harris	Infants', Children's, and } Boston City Hospital	24	Oct.—May	25.
83. Advanced Dermatology, 4 courses	Drs. Post and C. M. Smith	Mass. General Hospital	24	Oct.—May	25.
84. Syphilis, 2 courses	Prof. Putnam, Drs. Taylor and Waterman	"	48	Oct.—May	50.
85. Advanced Clinical Neurology	Dr. Knapp	Boston Dispensary	24	Oct., Nov., Dec., Jan.	25.
86. Normal Anat. of Nervous System	Dr. Taylor	Mass. General Hospital	..	Oct.—June	25.
87. Path. Anat. of Nervous System	Dr. Taylor	Boston City Hospital	15	Feb.—May	15.
88. Advanced General Neurology	Dr. Taylor	Medical School	15	Special	25.
89. Clinical Neurology	Dr. Taylor or Dr. Waterman	Med. Sch., Mass. Gen. & } Long Island Hospitals Mass. General Hospital	..	Special	50-75.
			15	Oct.—May	20.

90. Psychiatry	{	Drs. Cowles, Tuttle and Noyes	McLean and Boston Insane Hospitals	Oct.—May	25.
91. Operative Otolary		Dr. Hammond	" "	25	25.
92. Ophthalmology		Dr. Jack	" "	12	25.
93. Ophthalmology, 2 courses		Dr. Quackenbush	" "	25	25.
94. Ophthalmology		Dr. Spalding	" "	Oct., Nov.	Special.
95. Ophthalmology		Dr. Chap	" "	Special	Special.
96. Rhinology and Laryngology, 2 courses		Prof. Coolidge, Drs. Cobb, Goodale, and Mosher	Mass. General Hospital	Oct., Nov.; Dec., Jan.	25.
97. Rhinology and Laryngology, 2 courses		Prof. Coolidge, Drs. Clark and Mosher	" "	Feb.—Mar.	20.
98. Rhinology and Laryngology, 2 courses		Prof. Coolidge, Drs. Clark and Goodale	" "	Apr., May	20.

* Time includes months named. When time and fee are "special," arrangements must be made with the instructor.

† Women admitted conditionally.

+ Women admitted.

SUMMER COURSES OF INSTRUCTION PROVIDED IN 1906

No.	Subject	Instructor	Place	No. of Exer- cises	Begins	Ends	Days	Hour	Fee
Anatomy									
1	Anatomy of Nose and Throat	Dr. Mosher	Medical School	12	..	..	Special	..	\$25
2	Anat. of male genito-urinary organs	Dr. Davis	Medical School	5	..	..	Special	..	25
3	An. of female genito-urinary organs	Dr. Wadsworth	Medical School	5	..	..	M.Tu.W.Th.F.	..	20
4	Surgical Anatomy of Abdomen	Dr. Cheever	Medical School	6	June 1	Sept. 29	..	..	25
Histology and Embryology									
5	Element. Histology & Embryology	Dr. Lewis	Medical School	26	July 2	July 31	Daily	9-5	35
Physiology									
†6	Physiology	Prof. Porter	Medical School	30	June 25	July 28	Daily	9-5	40
Biological Chemistry									
†7	Laboratory practice and lectures in Biological Chemistry	Drs. Alsberg and Henderson	Medical School	26	July 2	July 31	Daily	9-5	35
†8	Research in Biological Chemistry	Drs. Alsberg and Henderson	Medical School	..	..	..	..	..	..
Pathology									
9	Pathological Technique	Prof. Mallory	City Hospital	41	July 2	Aug. 18	Daily	9-5	50
10	Neuropathology	Dr. Southard	Danvers Ins. Hosp.	25	Sept. 1	Sept. 29	Daily	9-5	40

No.	Subject	Instructor	Place	No. of Exer- cises	Begins	Ends	Days	Hour	Fee
	Medicine (<i>continued</i>)								
†21	<i>a.</i> Physiological Therapeutics	Dr. R. C. Cabot	Mass. Gen. Hosp.	27	June 14	July 14	Daily	9	25
	<i>b.</i> do.	do.	do.	27	July 16	Aug. 16	Daily	9	25
†22	Relation of Clinical Diagnosis to Post-Mortem Findings	Drs. R. C. Cabot and O. Richardson	Mass. Gen. Hosp.	8	June 14	Aug. 16		3-5	10
23	Physical Diagnosis	Dr. Lord	Mass. Gen. Hosp.	21	June 1	June 30	Daily	9-1	25
24	<i>a.</i> Physical Diagnosis	Dr. Palfrey	Long Island Hosp.	13	June 1	June 29	Tu. Th. F.	9-15	15
	<i>b.</i> do.	do.	do.	13	July 2	July 31	Tu. Th. F.	9-15	15
	<i>c.</i> do.	do.	do.	14	Aug. 2	Aug. 31	Tu. Th. F.	9-15	15
25	Lab. methods of Clinical Diagnosis	Dr. Hewes	Mass. Gen. Hosp.	30	June 18	July 28	M.Tu.W.Th.F.	9-12	30
26	Diseases of Stomach and Intestines	Dr. Hewes	Mass. Gen. Hosp.	20	July 2	July 31	M.Tu.W.Th.F.	9-11	25
†27	Diseases of the Digestive Organs	Dr. White	City Hospital	12	June 1	June 30	. .	. .	15
	Pediatrics								
†28	Pediatrics	Dr. Morse	Infants' Hospital	12	June 1	June 29	M. W. F.	. .	20
†29	Pediatrics	Dr. Dunn	Infants' Hospital	26	July 2	July 31	Daily	. .	20
†30	Pediatrics	Drs. Morse and Dunn	Children's Hosp. & Infants' Hosp.	24	Aug. 1	Aug. 31	Daily	. .	50
†31	Pediatrics	Dr. Bowditch	Children's Hosp.	13	Sept. 1	Sept. 29	Tu. Th. S.	11	20
	Surgery								
32	General Surgery	Dr. Munro	Carney Hospital	24	. .	. .	Daily	9-12	25
†33	Major Surgery	Drs. Scudder and Greenough	Mass. Gen. Hosp.	24	June 1	Sept. 29	Daily	9-1	25

34	a. Major Surgery b. do.	Drs. Mumford, Williams, and O. Richardson do.	Mass. Gen. Hosp. do.	24 24	June July	4 2	June 30 July 28	Daily Daily	9-12 9-12	25 25
35	a. Clinical Surgery and Pathology of Surgical Diseases b. do. c. do. d. do.	Drs. Lund and Nichols do. do. do.	City Hospital do. do. do.	24 24 24 24	June July Aug. Sept.	1 2 1 1	June 30 July 31 Aug. 31 Sept. 29	Daily Daily Daily Daily	10 10 10 10	25 25 25 25
36	Major Surgery	Dr. Lothrop	City Hospital	26	Sept.	1	Sept. 29	Daily	10	25
37	a. Major Surgery b. do. c. do.	Dr. Hubbard do. do.	City Hospital do. do.	26 26 26	June Aug. Sept.	1 1 1	June 30 Aug. 31 Sept. 29	Daily Daily Daily	9 9 9	25 25 25
38	Technique of Major Operative Sur- gery on Animals	Dr. Cheever	Medical School	4	..	..	..	..	..	20
39	a. Out-patient and Minor Surgery b. do.	Dr. Farrar Cobb do.	Mass. Gen. Hosp. do.	26 26	July Aug.	2 1	July 31 Aug. 31	Daily Daily	9-12 9-12	15 15
40	a. Minor Surgery b. do. c. do.	Dr. Brewster do. do.	Mass. Gen. Hosp. do. do.	26 26 29	June July Aug.	1 2 1	June 30 July 31 Aug. 31	Daily Daily Daily	10 10 10	25 25 25
41	a. Out-patient Surgery b. do. c. do. d. do.	Dr. Codman do. do. do.	Mass. Gen. Hosp. do. do. do.	24 24 24 24	June July Aug. Sept.	1 2 1 1	June 30 July 31 Aug. 31 Sept. 29	Daily Daily Daily Daily	10-1 10-1 10-1 10-1	25 25 25 25
42	a. Minor Surgery b. do.	Dr. Faulkner do.	City Hospital do.	24 24	Aug. Sept.	6 3	Aug. 31 Sept. 29	Daily Daily	9-11½ 9-11½	25 25
43	a. Out-patient Surgery b. do.	Dr. Crandon do.	City Hospital do.	24 24	Aug. Sept.	1 1	Aug. 31 Sept. 29	Daily Daily	9-12 9-12	15 15

† Women are admitted.

No.	Subject	Instructor	Place	No. of Exer- cises	Begins	Ends	Days	Hour	Fee
Surgery (continued)									
144	a. Gen. Surgery of Children	Dr. Stone and volunteer assistant surgeons	Children's Hosp.	30	June 1	June 30	Daily		25
	b. do.	do.	do.	30	July 2	July 31	Daily		25
	c. do.	do.	do.	30	Aug. 1	Aug. 31	Daily		25
	d. do.	do.	do.	30	Sept. 1	Sept. 29	Daily		25
145	a. Surgical Diagnostic Radiology	Dr. Brown	Carney Hospital	12	June 1	June 29	M. W. F.	10	25
	b. do.	do.	do.	12	July 2	July 30	M. W. F.	10	25
	c. do.	do.	do.	12	Sept. 3	Sept. 28	M. W. F.	10	25
146	a. Surgical Diagnostic Radiology	Dr. Brown	Children's Hosp.	16	June 1	June 30	M. Tu. W. S.	4-6	25
	b. do.	do.	do.	16	July 2	July 31	M. Tu. W. S.	4-6	25
	c. do.	do.	do.	16	Sept. 3	Sept. 29	M. Tu. W. S.	4-6	25
147	a. Theory and Practice of the Roentgen Ray	Dr. Brown	Instructor's Lab.	15	June 1	June 29	M. W. F.	8 P.M.	25
	b. do.	do.	do.	15	July 2	July 30	M. W. F.	8 P.M.	25
	c. do.	do.	do.	15	Sept. 3	Sept. 28	M. W. F.	8 P.M.	25
Orthopedic Surgery									
48	a. Orthopedic Surgery	Prof. Bradford, and Drs. Lovett, Brackett, Danc, Souther, Low, Brown, Adams.	Children's Hosp. Boston Dispensary, Warren Museum	26	July 2	July 31	Daily		50
	b. do.	do.	do.	26	Aug. 1	Aug. 31	Daily		50
	c. do.	do.	do.	26	Sept. 1	Sept. 29	Daily		50
49	Lateral Curvature	Dr. Lovett	Children's Hosp.	24	July 2	Aug. 15			25
50	Orthopedic Surgery	Dr. Brackett	Children's Hosp.	12	Aug. 16	Sept. 29			15

†51	a. Diseases of the Bones and Joints	Dr. Goldthwait and Osgood	Mass. Gen. Hosp.	26	June 1	June 30	Daily	9½-12½	25
	b. do.	do.	do.	26	July 2	July 31	Daily	9½-12½	25
	c. do.	do.	do.	26	Aug. 1	Aug. 31	Daily	9½-12½	25
	d. do.	do.	do.	26	Sept. 1	Sept. 29	Daily	9½-12½	25
52	Orthopedic Surgery	Dr. Soutter	Children's Hosp.	18	July 2	Aug. 15	. .	. .	20
	Genito-Urinary Surgery								
53	a. Genito-Urinary Surgery	Dr. Thorndike	City Hospital	18	July 2	July 31	M. Tu. Th. F.	10-12	15
	b. do.	do.	do.	18	Aug. 2	Aug. 31	M. Tu. Th. F.	10-12	15
54	Minor Genito-Urinary Surgery	Dr. Cotton	Boston Dispensary	24	July 2	July 31	Daily	9-10	25
55	a. Genito-Urinary Diseases	Dr. Perry	Boston Dispensary	26	June 1	June 30	Daily	9½-12½	25
	b. do.	do.	do.	26	July 2	July 31	Daily	9½-12½	25
	c. do.	do.	do.	26	Aug. 1	Aug. 31	Daily	9½-12½	25
	d. do.	do.	do.	26	Sept. 1	Sept. 29	Daily	9½-12½	25
	Obstetrics								
56	Clinical Obstetrics	Dr. Swain, assisted by Drs. Friedman and Torbert.	Lying-in Hospital	. .	May 1	Oct. 1	Daily	. .	30
57	a. Clinical Obstetrics	Dr. Swain	Lying-in Hospital	26	July 2	July 31	Daily	11	20
	b. do.	do.	do.	27	Aug. 1	Aug. 31	Daily	11	20
	c. do.	Dr. Torbert	do.	25	Sept. 1	Sept. 29	Daily	11	20
	Gynaecology								
†58	Operative Gynaecology	Dr. Storer	Carney Hospital	15	July 2	Aug. 31	M. W. F.	9½	25
59	Gynaecology	Dr. Friedman	City Hospital	13	July 2	July 31	Tu. Th. S.	10-12	25

† Women are admitted.

No.	Subject	Instructor	Place	No. of Exer- cises.	Begins	Ends	Days	Hour	Fec	
Gynaecology (continued)										
60	a. Gynaecology — Diagnosis and Treatment do.	Dr. Young do.	City Hospital	12	Aug. 1	Aug. 31	M. W. F.	9½	30	
	b.		do.	do.	12	Sept. 3	Sept. 29	M. W. F.	9½	30
61	Major Gynaecology	Dr. Mason.	City Hospital	13	July 2	July 30	M. W. F.	9½	25	
62	a. Minor Gynaecology do.	Dr. Mason do.	City Hospital	13	Aug. 2	Aug. 30	Tu. Th. S.	9½	25	
	b.		do.	do.	13	Sept. 1	Sept. 29	Tu. Th. S.	9½	25
Dermatology & Syphilis										
63	a. Clinical Dermatology	Drs. Bowen, White, Towle, and Burns. do. do.	Mass. Gen. Hosp.	26	June 1	June 30	Daily	9-12	35	
	b. do.		do.	do.	26	July 2	July 31	Daily	9-12	35
	c. do.		do.	do.	26	Sept. 1	Sept. 29	Daily	9-12	35
+64	Clinical Dermatology	Dr. Burns	Mass. Gen. Hosp.	13	Aug. 1	Aug. 30	M. W. Th.	9-12	15	
65	a. Syphilis b. do. c. do. d. do.	Dr. C. M. Smith do. do. do.	Boston Dispensary	21	June 1	June 29	M. Tu. W. Th. F.	10	25	
			do.	do.	21	July 2	July 31	M. Tu. W. Th. F.	10	25
			do.	do.	21	Aug. 1	Aug. 31	M. Tu. W. Th. F.	10	25
			do.	do.	21	Sept. 3	Sept. 28	M. Tu. W. Th. F.	10	25
Neurology										
66	a. Clinical Neurology b. do. c. do.	Dr. Baldwin do. do.	Mass. Gen. Hosp.	26	June 1	June 30	Daily	9-12	25	
			do.	do.	26	July 2	July 31	Daily	9-12	25
			do.	do.	26	Aug. 1	Aug. 31	Daily	9-12	25

TABULAR VIEW OF UNDERGRADUATE COURSES.

FIRST YEAR — First Half-Year

	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
9-10	<i>October, January.</i> Anatomy. Lecture. <i>November, December.</i> Dissection and Demonstrations.	<i>Oct., Nov., Dec., Jan.</i> Anatomy. Lecture.	<i>Oct., Nov., Dec., Jan.</i> Anatomy. Lecture.	<i>October, January.</i> Anatomy. Lecture. <i>November, December.</i> Dissection and Demonstrations.	<i>January, 9-11.</i> Anatomy. Lecture.	
10-1			<i>October.</i> Osteology. <i>November, December, January.</i> Dissection and Demonstrations.			<i>Oct., Nov., Dec., Jan. 11-1.</i> Anatomy. Lecture.
2-6		<i>January.</i> Brain and Special Sense Organs. Lectures, Demonstrations, and Recitations.				
2-2.30			<i>October, November, December.</i> Histology. Lecture.			
2.30-6			Histology. Laboratory.			

FIRST YEAR. — Second Half-Year.
PHYSIOLOGY. FEBRUARY.

	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
9-9.30	Conference.		Conference.			
9.35-12	Laboratory Experiments.	9.35-9.50		Written Test.		10-11 Recitation.
12-1	Written Test.	9.50-1		Laboratory Experiments.		11-12 Demonstration.

March, April, May.

9-10	Lecture. Conference.		Lecture. Conference.		9-9.45	Thesis.
10.05-10.20	Written Test.		Written Test.		10-11	Recitation.
10.20-12	Laboratory Experiments.	10.20-12.15		Laboratory Experiments.	11-12	Demonstration.
12-1	Written Test.	12.15-1		Thesis.		

BIOLOGICAL CHEMISTRY.

2-3	Lecture. Daily except Saturday.					
3-6	Laboratory. Daily except Saturday.					

SECOND YEAR. — First Half-Year.

	OCTOBER.	NOVEMBER.	DECEMBER.	JANUARY.
9-12	Pathology. Laboratory.	1 week. Pathology. Laboratory. Daily.	2 and 3 weeks. Pathology of certain Parasitic Diseases. Laboratory. T. Smith. Daily.	Monday, Wednesday, and Friday. Surgery. Clinical Lecture. Nichols. B. C. H.
				Tuesday, Thursday, and Saturday.
				Monday, Wednesday, and Friday. Pathology. Laboratory.
12-1	Pathology. Lectures. Daily.			Pathology. Lectures. Daily.
2-3	Bacteriology. Lectures. Daily except Saturdays.		Pathology of the Nervous System. Laboratory. Southard.	Daily except Saturday. Surgical Pathology. Laboratory. Nichols.
3-5.30	Bacteriology. Laboratory. Daily except Saturdays.			

SECOND YEAR. — Second Half-Year.

	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
	M. G. H.	M. G. H.	B. C. H.	M. G. H.	M. G. H.	B. C. H.
9-10	Clinical Medicine Clinic Shattuck	Surgery Clinic M. H. Richardson	Surgery Clinic Lothrop	Theory & Practice Clinic Fitz	Surgery Clinic M. H. Richardson	Clinical Medicine Clinic Jackson
10-12	Section Work					Surgery Clinic J. B. Blake
1-3	Clinical Pathology					
3-4	Hygiene. L. Harrington	Theory & Practice. L. Fitz Room 201	Hygiene. L. Harrington	Hygiene. L. Harrington	Theory & Practice. L. Fitz Room 201	
4-5	Surgery. L. Warren Room 201	Pharmacology. L. Pfaff	Pharmacology. L. Pfaff	Surgery. L. Warren Room 201	Pharmacology. L. Pfaff	
5-6	Surgical Technique 6 lectures Lothrop Room 201	Surgery. L. Warren Room 201			Surgery. R. Burrell Room 201	

THIRD YEAR. — First Half-Year.

	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
<i>Class Exercises</i> 9-10	Theory and Practice Clinic Cutler, M. G. H.	Clinical Medicine Clinic Jackson, B. C. H.	Clinical Medicine Clinic Shattuck, M. G. H.	Neurology Clinic Putnam, M. G. H.	Clinical Medicine Clinic Sears, B. C. H.	Clinical Medicine Clinic Shattuck, M. G. H.
10-11	Surgery Clinic M. H. Richardson M. G. H.	Clinical Surgery Clinical L. Burrell, B. C. H.	Dermatology Clinic Bowen, M. G. H.	Theory and Practice Clinic Fitz, M. G. H.	Pediatrics Clinical L. Roteh, C. H.	Theory and Practice Clinic Fitz, M. G. H.
<i>Sections</i> 11-1	Section Work.					
2-3						
3-4	Obstetrics, L. W. L. Richardson Room 205	Theory and Practice L. Fitz Room 201	Obstetrics Conference Green Room 205	Obstetrics, L. W. L. Richardson Room 205	Theory and Practice L. Fitz Room 201	
4-5	Surgery, L. Warren Room 201	<i>Oct., Nov.</i> Dermatology, L. Bowen Room 205 <i>Dec., Jan.</i> Syphilis, L. Post Room 205	Surgery, L. Warren Room 201	Pediatrics, L. Roteh Room 205	Therapeutics, L. Pfaff	Orthopedic Surgery L. Bradford Room 201
5-6	<i>Oct., Nov.</i> Ophthalmology Standish Room 205	<i>Oct., Nov.</i> G.-U. Surgery, L. Thorndike Room 201	<i>Oct., Nov.</i> Ophthalmology Standish Room 205	Surgery, R. Burrell Room 201	Obstetrics, R. Newell Room 205	

THIRD YEAR. — Second Half-Year.

	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
<i>Class Exercises</i> 9-10	Neurology Clinic Putnam, M. G. H.	Clinical Medicine Clinic Bartol, B. C. H.	Neurology Clinic Putnam, M. G. H.	Clinical Medicine Clinic Sears, B. C. H.	Clinical Medicine Clinic Bartol, B. C. H.	Clinical Medicine Clinic Shattuck, M. G. H.
10-11	Surgery. Clinic M. H. Richardson M. G. H.	Clinical Surgery Clinical L. Burrell, B. C. H.	Dermatology Clinic Bowen, M. G. H.	Clinical Surgery Clinical L. Burrell, Gay, or Monks, B. C. H.	<i>Feb., Mar.</i> Pediatrics Clinical L. Rotch, C. H. Morse, No. Grove St. <i>Apr., May</i> Syphilis Clinical L. Post, B. D.	Theory and Practice Clinic Fitz, M. G. H.
<i>Sections</i> 11-1	Section Work.					
2-3	Municip. Sanita. Durgin Room 207		Psychiatry Cowles Room 201	Municip. Sanita. Durgin Room 207		
3-4	Obstetrics. L. W. L. Richardson Room 205	Surgery Case Teaching J. B. Blake	Gynaecology L. or R. Green, Room 205	Obstetrics. L. W. L. Richardson Room 205	Obstetrics. R. Newell Room 205	Psychiatry Clinic Noyes, B. H.
4-5	Pediatrics. L. & R. Rotch, Morse Room 205	Pediatrics. L. & R. Rotch, Morse Room 205	Obstetrics Conference Green, Room 205	Laryngology Lecture Coolidge, Room 205	Gynaecology. L. Green Room 205	
5-6	Otology Lecture Blake, Room 205	Clinical Medicine Case Teaching R. C. Cabot Room 205	Clinical Medicine Case Teaching R. C. Cabot Room 205	Otology Lecture Blake, Room 205		

DEGREES.

On February 28, 1906, degrees were conferred as follows :—

M. D.

Leslie Talbot Baker, A.B. 1900.
 Freeman Dodd Bosworth, Jr., A.B. 1901.
 Francis Lowell Burnett, S.B. 1902.
 Charles Wilson Goodwin, B.P. (*Brown Univ.*) 1897.
 Harry Frye Holt.
 Charles Arthur Oak.
 David Robinson, A.B. (*Brown Univ.*) 1901.
 Harold Elmer Ellsworth Stevens, A.B. (*Bates Coll.*) 1901.
 Henry Tolman, Jr.
 Rufus Adrian Van Voast, PH.B. (*Yale Univ.*) 1900.
 Carl Hamlin Witherell, A.B. (*Colby Coll.*) 1901.

M. D. (*Out of course.*)

Francis Eugene Talty, A.B. (*Manhattan Coll.*) 1901, as of the class of 1905.

On Commencement Day, June 27, 1906, degrees were conferred as follows :—

M.D.

Parnag Adam Adamian, A.B. (*Central Turkey Coll.*) 1897, B.D. (*Epis. Theol. School, Cambridge*) 1901.
 Harold Woods Baker, S.B. 1903.
 John Mathews Birnie, A.B. (*Williams Coll.*) 1901.
 Walter Meredith Boothby, A.B. 1902.
 Harold Milton Bruce, A.B. 1902.
 Henry Alphonsus Callahan, A.B. (*Boston Coll.*) 1902.
 Merrill Edwin Champion, A.B. 1902.
 Gilman Leeds Chase, A.B. 1903.
 Charles Leonard Christiernin, A.B. 1902.
 William Henry Connor, A.B. (*Holy Cross Coll.*) 1902.
 Jeremiah Joseph Corbett, A.B. (*St. Francis Xavier's Coll.*) 1899.
 Fred Julius Fassett, A.B. (*Yale Univ.*) 1898.
 Pippo Joseph Gafforio, B.L. (*Dartmouth Coll.*) 1900.
 Henry White Godfrey, A.B. 1902.
 Paul Williams Goldsberry, A.B. (*Williams Coll.*) 1892.
 Frank Andrew Hamilton.
 Ralph Augustus Hatch, S.B. 1903.

- Charles Byam Hollings, A.B. 1900.
 Charles Herbert Holt, PH.B. (*Brown Univ.*) 1902.
 Herbert William Johnson.
 Roger Kinnicutt, A.B. 1902.
 Robert James Kissock, A.B. 1903.
 William Theodore Knoop, A.B. (*Brown Univ.*) 1901.
 Roscoe Hosmer Knowlton, A.B. 1903.
 William Edwards Ladd, A.B. 1902.
 Jerome Sam Leopold, A.B. 1903.
 Bernard Francis McGrath, A.B. (*Georgetown Univ.*) 1894, M.D. (*ibid.*) 1895.
 George Joseph McKee.
 Daniel Francis Maguire, A.B. 1903.
 John Brown Manning, S.B. 1903.
 Francis Vincent Murphy, A.B. (*Dartmouth Coll.*) 1902.
 James Archer O'Reilly, A.B. 1902.
 Oscar Pardo.
 Bradford Hendrick Peirce, A.B. 1902.
 Dunlap Pearce Penhallow, S.B. 1903.
 Lucius Beverly Pond, A.B. (*Yale Univ.*) 1902.
 David Damon Pratt, S.B. (*Dartmouth Coll.*) 1902.
 Frederick Haven Pratt, A.B. 1896, A.M. 1898.
 Charles Arnold Reese, A.B. (*Brown Univ.*) 1902.
 Edward Hammond Risley, A.B. (*Yale Univ.*) 1902.
 John Carter Rowley, A.B. 1902.
 Arthur Hiler Ruggles, A.B. (*Dartmouth Coll.*) 1902.
 Harvey Beede Sanborn, A.B. (*Dartmouth Coll.*) 1902.
 Philip Haskell Sylvester, A.B. 1902.
 James Guinne Trimble, Jr., A.B. (*Fiske Univ.*) 1902.
 Charles Sampson Turner, PH.B. (*Brown Univ.*) 1901, A.M. (*ibid.*) 1902.
 Orion Vassar Wells, A.B. (*Boston Univ.*) 1902.
 Benjamin Ezra Wood, A.B. 1901.
 John Howard Wyman, A.B. (*Bowdoin Coll.*) 1901.

M.D. cum laude

- Williston Wright Barker, A.B. (*Brown Univ.*) 1902.
 William Bradford Bartlett, A.B. 1902.
 Leslie Lawson Bigelow, A.B. 1903.
 David Hartin Boyd, A.B. (*Washington & Jefferson Coll.*) 1902.
 Harold Granville Calder, A.B. (*Brown Univ.*) 1902.
 Laurence Dudley Chapin, A.B. 1902.
 Arthur Edwin Darling, A.B. (*Bates Coll.*) 1902.

- Channing Frothingham, Jr., A.B. 1902.
Ralph Harvard Goldthwaite, A.B. 1903.
Robert Montraville Green, A.B. 1902.
Carleton Ray Metcalf, A.B. 1902.
Charles Galloupe Mixter, S.B. (*Massachusetts Inst. of Tech.*) 1902.
William Jason Mixter, S.B. (*Massachusetts Inst. of Tech.*) 1902.
Henry Church Pillsbury, A.B. (*Dartmouth Coll.*) 1902.
Edward Peirson Richardson, A.B. 1902.
Wilbur Augustus Sawyer, A.B. 1902.
Ernest Harold Sparrow, A.B. 1902.
Emil Herman Stone, A.B. 1902.
Fresenius Van Nüys, A.B. (*Univ. of Virginia*) 1899.
James Herbert Young, S.B. 1903.

ADMISSION EXAMINATION.

—◆—
JUNE, 1906.
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CHEMISTRY.

1. What are the properties of the oxides of sulphur, of carbon, and of iron? How is sulphuric acid prepared?

2. How much silver chloride can be prepared from 14.7 gm. hydrochloric acid? ($H = 1$, $Ag = 108$, $Cl = 35.5$)

If one liter of oxygen and two liters of hydrogen be exploded, what is the volume of the resulting aqueous vapor?

3. How do you distinguish between nitric, hydrochloric, and acetic acid?

4. How do you prove the presence of copper and lead when both are present?

EXAMINATION PAPERS.

(*Annual Examinations, 1906.*)

First Year Studies.

ANATOMY.—Professor DWIGHT.

1. Describe the clavicle.
2. Describe the hip-joint.
3. Describe the compressor urethrae muscle, giving its relations to fasciae.
4. Describe the circulation of the liver.
5. Describe the vagina and the neck of the uterus. Give the anterior and posterior relations of the vagina.
6. Describe the origins, deep and superficial, of the trigeminal nerve.

Dental students will substitute the following questions for 1, 3, and 5 of the above.

1. Describe the mandible.
3. Describe the antrum of Highmore, giving its relations to teeth and its development.
5. Describe the bicuspid teeth.

HISTOLOGY AND EMBRYOLOGY.—Professor MINOT.

[Each student is given three sections to correspond with the first three questions below. He is expected to make simple drawings only, but sufficient to show that he has correctly identified the parts. Any student who draws tissues or structures, not shown in his preparations, will be considered to have failed in all his answers.]

1. Draw and describe the lymphoid tissue. Where is it found in the organ?

2. What is the specimen? Draw and describe its various layers. Of what germ layers is it composed?

3. What is the organ? Draw and describe all the epithelial structures found in it.

4. From a chick embryo of the age studied in the laboratory, draw a transverse section passing through a primitive segment (protovertebra). Label all the parts, and state the adult derivative of each. (Do not describe the transformations to the adult structures.)

5. Describe the development of the testis, and its relations to the mesonephros (Wolffian body). Account for the germ cells, but do not describe spermatogenesis, the descent of the testes, or the membranes surrounding them.

6a. *For medical students only.* Describe briefly the development of the placenta, including both the fetal and the maternal portions.

6b. *For dental students only.* Describe the temporary tooth and its adjacent membranes as they appear in the section provided. No drawings of this specimen are required.

PHYSIOLOGY. — Professor W. T. PORTER.

[Answer any three questions, but not more than three. Mention, where possible, experimental evidence in support of your opinion. Matter not bearing directly on the question asked will count against the writer.]

1. Give a general account of the vasomotor nervous system.
2. Discuss the secretion of urine.
3. Discuss the changes of pressure in the auricle, ventricle, and aorta.
4. State the principal data regarding taste and smell.

PRACTICAL EXAMINATION IN PHYSIOLOGY.

[Each student is required to make four of the six experiments drawn by him, and to write an account of his observations on the blank furnished herewith. Where the results of the experiments are not expressed in a graphic record they must be demonstrated to the instructor.]

1. Record the action of the sympathetic on the heart. Demonstrate the progressive spreading of impulses in the central nervous system. Record curves showing the influence of changes in the aortic pressure on the interval between the beginning of ventricular contraction and the opening of the semilunar valves (in the artificial scheme).

2. Demonstrate that the cardiac systole is a simple and not a tetanic contraction. Show the influence of load on the work done by the skeletal muscle. Show where the more complicated coördinated reflex acts have their centres.

3. Show evidence that the ventricular contraction wave may be transmitted by muscular tissue. Prove that the excitability of a nerve is altered in the neighborhood of the anode and the cathode during the passage of the galvanic current. Secure a record of the effect of duration of stimulus on smooth muscle.

4. Furnish experimental evidence for an explanation of the auriculo-ventricular interval. Prove that the galvanic current stimulates during the whole time of its passage through an irritable tissue. Demonstrate the influence of increased load on ventricular contraction.

5. Prove the existence of tonic contraction of muscle. Demonstrate the current of action in muscle or nerve. Give experimental evidence that the vagus connects with the nerve cells in the heart.

6. Demonstrate polar stimulation by the galvanic current. Show the vasomotor functions of the spinal cord. Demonstrate the inhibition of reflex action in the frog.

7. Show the function of the anterior spinal nerve-roots. Record with the artificial scheme pulse curves of low arterial tension and high arterial tension, and discuss their method of production. Contrast diagrams showing the formation of the image (1) in myopia, (2) in hypermetropia, (3) in hypermetropia with a correcting lens.

8. Record the effect of inhibition of the heart on arterial pressure in the frog. Demonstrate on muscle the different effect of sudden and of gradual increase in intensity of stimulus. Prove the discontinuous nature of tetanic contraction.

9. Record the effect of stimulation of the vagus on the beat of the ventricle. Show that all contractions of heart muscle are maximal. Give experimental evidence that a nerve fibre may conduct impulses in both directions.

10. Show by diagram the method of determining the size of a retinal image. Demonstrate the limits of the refractory period and the existence of the compensatory pause. Prove that the demarcation current (current of injury) may act as a stimulus.

11. Record curves showing the influence of temperature on the contraction of skeletal muscle. Demonstrate differences in the physiology of smooth and striated muscle. Show that the control of movements is localized at different levels of the spinal cord.

12. Show that a constant stimulus may cause periodic contraction. Show the influence of fatigue on muscular contraction. Draw a construction showing the formation of the image in the indirect method of observing the retina.

13. Show the segmental arrangement of the reflex apparatus. Draw a diagram showing the course of the rays in astigmatism. Show the influence of an increase in peripheral resistance on the blood pressure in the frog.

14. Prove the independent irritability of muscle. Show experimental proof of the law of contraction with weak, medium, and strong ascending currents. Demonstrate with the artificial thorax the relations between pulmonary and intra-thoracic pressure during inspiration and expiration. State these relations in writing, with diagrams.

15. Compare an isometric contraction with an isotonic contraction. Obtain from the artificial scheme of the circulation a characteristic pulse curve of aortic regurgitation and explain its production. Demonstrate and discuss the apparent purpose in reflex action.

16. Demonstrate that the physiological anode and cathode may differ from the physical poles. Prove that oxidation may be caused by animal tissue. Demonstrate the influence of the sympathetic nerve on the iris of the frog.

17. Demonstrate polar inhibition. Demonstrate the importance of the nucleus in intracellular oxidations. Prove that tonic and simple contractions of the same tissue may occur at the same time.

BIOLOGICAL CHEMISTRY. — Drs. ALSBERG and HENDERSON.

(2 hours written.)

1. What is the constitutional relationship between ethyl alcohol, aldehyde and acetic acid? Where in the organism are compounds to be found which contain the alcohol group?

2. Where does cholesterin occur? What are its properties?

3. What is the chemical relationship between glucose and cane-sugar? What is the fate of cane-sugar upon ingestion?

4. Very briefly discuss the nature of enzymes and their action.
5. What is the nature of the proteid molecule? What is haemoglobin? What are nucleoproteids?
6. What can you say about acidosis?
7. What are the sources of the uric acid of the urine?
8. What are the sources of body fat?
9. In what forms is sulphur to be found in the urine?
10. What do you understand by the availability of the food?

BIOLOGICAL CHEMISTRY.—Drs. ALSBERG and HENDERSON.

URINARY ANALYSIS AND HAEMATOLOGY.

(1 hour written.)

1. What are the elements of a urinary sediment which together indicate the existence of an active process somewhere in the urinary tract?
2. Give an example of a sediment found in a case of active inflammation of the kidney of an acute nature. What does the presence of fat in casts mean?
3. What other substances besides serum albumin may give the reaction in the nitric acid test? How can you distinguish each of these from serum albumin?
4. What other substances may be present in the urine besides dextrose which may give reactions with (1) the Fehling's test, (2) the fermentation test? By what physical or chemical tests can you distinguish amorphous phosphates from amorphous urates; uric acid crystals from calcic oxalate crystals?
5. Describe the method to be employed in fitting a student to determine by the examination of a stained smear of blood approximately the number of leucocytes per cubic millimeter present.

Second Year Studies.

BACTERIOLOGY.—Professor ERNST.

1. What conditions must be fulfilled to prove that a suspected micro-organism is the cause of an infection?
2. How do the bacteria produce their results, and what are the conditions which may modify their pathogenic action?
3. How would you prove that a specimen of pus submitted for examination was derived from a gonorrhoeal urethritis?
4. Describe a method for separating a mixture of bacteria into pure cultures?

PATHOLOGY.—Professor COUNCILMAN.

1. Discuss fatty degeneration, taking up the following headings:—
 - (a) Meaning of the term.
 - (b) Source of fat.
 - (c) Mention some of the conditions which produce it.
 - (d) How may it be recognized both by naked eye examination and by the microscope?

2. What is fat necrosis? State naked eye and microscopic appearance. Where and under what conditions does it appear?

3. What is meant by "dropsy"? What are the three physical conditions which lead to its production?

4. What is leucocytosis? What is its relation to acute inflammation?

5. Thrombi:

(a) Appearance?

(b) Where most common?

(c) Changes they may undergo?

(d) General causes?

6. Hypertrophied heart:

(a) Weight of heart in grammes in normal adult, male and female?

(b) On which side of heart is hypertrophy more common?

(c) Causes leading to its production?

(d) What changes in the heart will be found in a chronic case of aortic stenosis and insufficiency?

7. Give general description of an autopsy on a case of typhoid fever in the second week of the disease.

8. Name several ways in which posterior column degeneration may be produced. What is the disorder of function associated with posterior column degeneration?

Write answers to 9 and 10 on separate sheet of paper.

9. Mention the parasites and describe that part of their life cycle which may appear on the skin, in the feces, the urine, the sputum and the peripheral circulation.

10. In what ways may the pathological effects of the presence of *Ascaris*, *Uncinaria*, *Taenia echinococcus* and *Filaria bancrofti* express themselves.

[*Alternative to 9 or 10.*] Describe the anatomy and give the life history of a nematode and a cestode.

HYGIENE.—Professor HARRINGTON.

1. A city of 50,000 inhabitants, supplied with water from a polluted river and having a persistently high annual mortality from typhoid fever, installs a sand-filtration plant, and the death-rate due to that disease falls progressively during the succeeding five-year period. In the following year there occurs a sudden outbreak of the disease, and within two weeks 65 cases are reported. Being called upon to ascertain the cause and to take steps to abate the outbreak, what investigations would you make and what precautionary measures would you advise while the same are being carried to a conclusion?

2. Mention the conditions which lead to high bacterial multiplication in milk, and state what measures should be adopted to bring about the production of a sanitary milk-supply, having due regard to equitable treatment of both producer and consumer.

What are the inevitable consequences of a disregard of proper sanitary precautions in the production of market milk, and why are they more markedly manifest in mill populations than in purely residential communities?

3. Mention the classes of indoor occupations which involve such exposures and environmental conditions as to cause them to be dangerous to follow, especially for those with inherited or acquired tendencies to tubercular affections.

Discuss the fallacies involved in attempting to arrange the various occupations in the order of their supposed healthfulness by applying as a measure the death-rates obtaining or the average age at death.

4. Mention a disease the spread of which is beyond question dependent upon soil conditions. State the agency and the manner of spread.

What important differences can you mention in the habits of the species of mosquitoes connected with the spread of yellow fever and malaria?

Third Year Studies.

THERAPEUTICS. — Professor PFAFF.

1. Give in detail the action of lead compounds.
2. Action of ergot.
3. Action of strychnine.
4. Action of atropin and its therapeutical uses.
5. Write prescriptions for the following, avoiding abbreviations, and give directions in full to the patient: (1) arsenic; (2) iron; (3) morphine; (4) zinc sulphate; (5) apomorphine.
6. State the general indications of treatment in a case of severe acute gastro-enteritis.
7. What are the general indications of treatment in a case of acute poisoning?
8. How could you reduce the weight of a patient suffering from excessive adiposity? What are the rational principles which have to be observed in a dietetic treatment.

THEORY AND PRACTICE. — Professor FIRZ.

1. The method of origin and the treatment of the harmful effects of obesity.
2. Describe the antipyretic treatment of typhoid fever.
3. The diagnosis and treatment of the hook-worm disease.
4. State the conditions under which cardiac dropsy may be limited to the peritoneal cavity.
5. The symptoms and diagnosis of intrathoracic aneurism.
6. The differential diagnosis between abscess of the lung and pyopneumothorax communicating with the bronchi.
7. The advantages and disadvantages of gastroenterostomy.
8. State the circumstances under which exploratory incision is to be preferred to paracentesis in the treatment of fluid in the abdominal cavity.
9. The differential diagnosis of the causes of intestinal obstruction.
10. The diagnosis and treatment of tubercular disease of the genito-urinary tract.

CLINICAL MEDICINE.—Professor SHATTUCK.

[Discuss these cases in the order in which they are arranged. Assume that symptoms not mentioned are wanting; but as omissions, intentional or not, may occur, state them if essential. The intelligent discussion of the case will have more weight than a hasty and inconclusive, though correct, diagnosis. Write out all prescriptions in full.]

CASE 1. — A retired merchant seventy-two years old is seen February 21. His mother died of "liver disease," the nature of which is unknown. Although always a good liver he had never indulged in excess of any kind unless in the matter of work and outdoor exercise, and his general health had been excellent up to ten years ago, when he suffered for a time from shortness of breath and swelling of his feet and legs. He rapidly recovered under treatment, but a year or two later after a hard row against a head wind he had an attack of great dyspnoea accompanied by cyanosis and cough with the expectoration of frothy mucus. He soon resumed his usual method of life, and had no symptoms other than very slight dyspnoea on exertion up to about two years ago. Since then he has had occasional attacks of diarrhoea, which usually yielded promptly to mild astringents. Last December after a hearty dinner he went to bed feeling nauseated and with considerable abdominal discomfort, which rapidly increased until it amounted to pain. He vomited about 2 A.M., and was almost entirely relieved, though he complained of lameness in the morning. These attacks have been repeated every week or two, and have always followed an indiscretion in diet, but not every indiscretion was followed by an attack. The pain was always localized in the right side of the abdomen, particularly in the upper quadrant. It did not radiate in any especial direction, and was never followed by jaundice. For about two weeks it has recurred almost every day, and the feeling of lameness over the abdomen has been almost constant. Small doses of morphia have been occasionally required. The bowels have been kept open by laxatives. The stools appear normal. His appetite has failed, and he is beginning to be a little demoralized from the constant discomfort. He has lost a few pounds in weight.

The patient is a stockily built man, of medium height, well nourished, weighing 190 pounds. Color good. Marked arcus senilis. Tongue slightly coated. Peripheral arteries appreciably thickened. Heart's apex in fifth space in nipple line, right border a finger's breadth and a half to right of parasternal line. A systolic murmur is heard at the apex, transmitted slightly toward the axilla. The second sound at the base is short and sharp. The liver dulness begins in the fifth interspace in the nipple line, and extends fully two fingers' breadth below the costal margin. So far as can be made out through the thick abdominal walls the edge is sharp and the surface smooth. Extending below the edge, about in the nipple line, a rounded, somewhat elastic, and decidedly tender tumor can be made out, which seems about an inch and a half to two inches in diameter. It moves with the liver during respiration. The pulse, 74, intermits occasionally, but is not otherwise noteworthy. Temperature, 98.4°. Urine negative. Whites, 7000.

Diagnosis? Prognosis? Treatment?

CASE 2. — A cigar maker sixty years old is seen February 9. Family history negative. He had typhoid fever thirty years ago, and scarlet fever and measles in childhood. He has used both alcohol and tobacco in excess in early life, but for several years has been very temperate. Increased

micturition at night for several years. For a number of years he has had more or less constant indigestion and occasional dizzy spells, but kept at work at his trade and made little complaint of dyspnoea until about the middle of last December; since then he has suffered constantly from "asthma," the difficulty in breathing being present even when he was quiet, and greatly interfering with his sleep. He has also had a slight cough with a little white, frothy expectoration. His feet have recently been somewhat swollen at night. Three days ago, after unusual exertion, his dyspnoea became very urgent, his cough increased, and the expectoration became copious and slightly blood-tinged.

The patient, who is a well developed and well nourished man, is in bed propped up by three pillows, and is breathing with difficulty. There is marked cyanosis particularly of his face and neck. The superficial veins of the neck are distended and tortuous, but do not fill from below. There is dulness at the bases of both lungs with numerous medium moist râles. The right border of the heart extends a full inch beyond the right sternal border. Its upper border on the left of the sternum is at the upper border of the third rib. The apex is under the sixth rib an inch outside the nipple line. The heart's action is irregular and intermittent. The first sound at the apex is reduplicated, the second part being louder and sharper, and is followed by a short soft systolic murmur. The second pulmonic sound is reduplicated and louder than the aortic. The hepatic dulness begins above at the fifth interspace; the edge of the liver is indistinctly made out two inches below the costal margin. The abdomen is not remarkable; it is everywhere resonant. No general oedema. Slight pitting of both ankles and feet. Pulse, — small, weak, irregular, and intermittent; does not record every heart beat. Temperature, 97.6°. Respiration, 34. Urine, — high colored, acid; sp. gr. 1025. Albumen, slight trace. Sediment contains a rare blood globule, numerous hyaline and fine granular casts with an occasional fat globule adherent.

Diagnosis? Prognosis? Treatment?

CASE 3. — A lady forty-seven years old is seen April 24. Her mother died of some lung trouble, probably tubercular. Family history otherwise negative.

She had typhoid fever thirty years ago; nine years ago the glands in her left axilla became enlarged and suppurated, and were removed. During the next two years she underwent three operations for the removal of enlarged glands on both sides of her neck. Pathological examination showed them to be tubercular. After the last operation she gained in flesh and strength, and has since been better than at any time before. She had malaria five years ago, and was in bed a week with daily chills and fever. About four weeks ago she began to lose strength and appetite, and to complain of headache and general discomfort. A few days later she developed a severe pain in the back of her neck, which still persists. April 8, while unwell, she was taken with a severe pain in the abdomen, particularly on the left side, which was accompanied by nausea. This was relieved after a Seidlitz powder, which produced a diarrhoea which was very troublesome for three or four days. There was nothing noteworthy about the dejections except that they contained considerable mucus. Since then she has been constipated. During the week from April 8th to the 15th her malaise increased; she was occasionally nauseated and felt very feverish toward night. About this time she developed a slight cough which was accompanied by the expectoration of stringy mucus. Neverthe-

less she kept about, preparing her country house for occupancy, but finally felt so wretched that on the afternoon of April 16 she sent for her family physician who found her temperature 104.5° . The afternoon temperature during the following days has been as follows: 104° , 103° , 102.4° , 102.6° , 101.4° , 101.6° , 102.4° , 101.6° . The morning temperature has varied between 98° and 99° . She has had frequent chilly sensations but no distinct chill, and has had a slight nosebleed twice. Physical examination shows a well developed and well nourished woman without marked prostration, whose face and ears are very slightly dusky. The sensorium is free. The scars of her operations are seen in the axilla and on both sides of her neck. The tongue is dry with a moderate white coat. There is very slight dulness over the apex of the left lung above the third rib where the respiratory murmur is somewhat interrupted, suggesting a cog-wheel character. Throughout both lungs an occasional squeak is heard on inspiration. Except that the first sound is somewhat impure at the apex, the heart shows nothing abnormal. The abdomen is not remarkable. Two small slightly raised pink spots are seen on its anterior surface which disappear on pressure. The spleen cannot be felt. Otherwise, physical examination is negative. Pulse, 112, of small volume and low tension. Respiration, 16; whites, 7000. A Widal test done three days ago was negative. Urine, acid; sp. gr. 1024; very slight trace of albumen. The sediment shows an occasional hyaline and fine granular cast.

Diagnosis? Prognosis? Treatment?

PEDIATRICS.—Professor ROTCH.

[More credit will be given to an intelligent discussion of the case than to a correct diagnosis unsupported by such discussion.]

1. Discuss the following case and give the differential diagnosis, and the treatment:—

A boy, twenty-six months old, had always been unusually strong and vigorous. He had had a little cold in the head for 2 or 3 days, but had not seemed at all sick. His appetite was rather poor on the 19th and consequently he was not given as much to eat as usual. His bowels moved normally just before going to bed. He was very restless all night and had a high fever. He was given 15 drops of sweet spirits of nitre every hour and was bathed several times. He vomited some large curds of milk during the night. About 8.30 A.M. on the 20th he had a severe convulsion. He was seen just after he came out of it.

Physical Examination. He was conscious but slightly rigid and twitched occasionally. There was marked pallor. There was no rigidity or tenderness in the neck. The membranæ tympanorum were normal. The throat was normal and the tongue considerably coated. The pupils were equal and reacted to light. The heart and lungs showed nothing abnormal. The liver and spleen were not palpable. The abdomen was negative. There was no paralysis of the extremities. The knee-jerks were equal and rather feeble. Kernig's sign was absent. The temperature 104° F., the pulse 160, the respiration 60.

The colon was washed out and a considerable amount of well-digested yellow feces obtained. He was given two tablespoonfuls of castor oil. Bromide and chloral were ordered to be given if necessary for the nervous symptoms and sponging with alcohol and water if the temperature was high.

He had no more convulsions, but twitched a little at times and was given several doses of bromide and chloral. The bowels moved three times as the result of the castor oil, the movements being loose, yellow, and containing a little undigested food. The temperature continued high. He coughed frequently and seemed to be in pain. There was no vomiting, but he took very little food.

The next morning he looked and acted sick. He was restless and irritable. There was marked pallor with a slight tinge of cyanosis about the lips. The respiration was rapid and at times grunting. The alae nasi moved with respiration. The throat and ears showed nothing abnormal. The tongue was moderately coated. The heart and lungs showed nothing abnormal. The abdomen was negative. The liver and spleen were not enlarged. There was no rigidity or paralysis of the extremities. Kernig's sign absent. The knee-jerks were equal and normal. The temperature was 104.6 F.; the pulse 140; the respiration 60.

The leucocytes numbered 24,000.

2. An infant of six months has been given since birth a mixture of equal parts of milk and water with a level tablespoonful of milk sugar to each twenty ounces of the mixture. He is getting at present four ounces at a feeding, every $2\frac{1}{2}$ hours, eight times a day. He has gained 3 pounds since birth, is very constipated, cries most of the day, especially at night, and vomits occasionally only.

(a) What percentages of fat, sugar, and proteids has the infant received?

(b) Criticize the feeding and state the probable causes of the symptoms mentioned.

(c) Write for an appropriate modification of milk from the laboratory to meet the indications for feeding.

3. What is the significance in infancy of a clay colored movement with mucus; of a dry, white movement; of a small movement composed entirely of mucus and blood; of a brown movement; of a black movement?

4. In what respects does rheumatic fever in young children differ from that disease in later life?

5. What clinical types of diarrhoea are classified as non-infectious and what as infectious in infancy and early childhood?

6. Describe Koplik's sign. What is its significance? How early does it appear in the disease?

SURGERY. — Professor WARREN.

1. What is the difference between the deformities of infantile paralysis and spastic paralysis?
2. Give the local signs and general symptoms of gangrene.
3. Give the treatment of a fracture of the lower end of the humerus.
4. Give the methods of treatment of aneurisms.
5. Symptoms, diagnosis, and treatment of fistula in ano.
6. Give the differential diagnosis of appendicitis.
7. Symptoms of an acute pancreatitis.
8. Give the diagnosis and treatment of a strangulated inguinal hernia.

9. Give the symptoms and treatment of hemorrhage of the middle meningeal artery.
10. Give the causes and treatment of apnea.

CLINICAL SURGERY. — Professor BURRELL.

1. Mrs. A., aged 36, was operated on for acute appendicitis many years ago by drainage of an abscess high up in right abdomen.

The present trouble began in January, 1906, with cessation of the menses, which up to that time had been regular. In March a slight flow occurred, and an irregular dribbling of blood. In the latter part of March, while in town, the patient was seized with violent pain in the abdomen, and was with difficulty brought home. A second attack of pain soon followed, and in the next three weeks there were several. At the end of three weeks the physician, after an unusually severe attack, was unable to make out anything by physical examination of the abdomen. There was no distention, no dullness, no faintness, no vomiting. The temperature and pulse were normal. The pain was so severe that much anxiety was caused, and it seemed wise to examine under ether. A fluctuating mass was found in the pelvis to right of uterus. Both breasts were enlarged and painful.

What is the diagnosis? What would you advise? What is the prognosis with and what without operation?

[In this and in the next two cases answer each question as briefly as possible.]

2. Mr. F. B., aged 56, of sedentary habits, had been sick two weeks. The trouble began with severe general pain in the abdomen, with no localizing symptoms. The bowels were constipated. Tenderness was general. The pain required several doses of morphia for its control. After a few days the bowels moved freely and the pain subsided. Before this movement the bowels were much distended. During the second week of illness there was a rise in temperature, with chills. The right hypochondrium and epigastrium became tender and prominent. The tenderness and prominence gradually increased, until there was softness and fluctuation in the middle of the prominent epigastrium. The family history was good. There had been no previous sickness; there had been no gastric disturbances. There had been no previous attacks like the present.

Physical Examination. — The patient's general appearance was not good. He was pale and pasty in the face. The pulse was 100+ and the temperature 102°. In the epigastrium there was a marked prominence which fluctuated and was markedly tympanitic. Under ether the tumor was incised in the median line. A burst of gas followed, with pus. The odor was extremely foul and fecal. The base of the abscess cavity was the liver, and the cavity extended as far as the finger could reach up under the diaphragm. The walls of the abscess cavity were covered with grayish-white exudate, and the whole bled easily.

Mention the possible sources of this localized infection. Would you have sought to remedy this source, or would you have contented yourself with drainage?

3. Leon K., aged 12. Seen in consultation Saturday, April 6, 1906. This vigorous boy eighteen days ago cut his left ankle with an axe, opening the ankle joint and the tarsus. There was much bleeding, and he was two miles from home. The ankle was bound up in an old tablecloth, and he

was hurried home. The attending physician, a skilful man of long experience, cleaned the wound as thoroughly as possible, and did it up in antiseptic gauze. The joint was, however, so badly infected at the time of the accident that it suppurated extensively. The highest temperature was 102° ; the pulse, 100. The ankle joint was suppurating, the smaller synovial cavities were full of pus. Drainage was inadequate. The pain and tenderness were excessive. The consulting surgeon advised and immediately made better drainage, washing out thoroughly the affected joint. The process had, however, so disorganized the joint that one could get, on manipulation, the peculiar "clucking" sensation of abnormal mobility and prolonged suppuration. On Sunday, the day after the operation, the temperature rose to 104° ; pulse, 160. The leucocytes were 35,000. It was thought that this was a temporary absorption from the freshly cut surfaces. On Monday the temperature was 104° ; pulse, 144. There were no chills. The abdomen was negative. There was no spreading up the leg. The foot and ankle looked no worse than before the operation. The patient was bright; he looked well. The constitutional absorption was, however, alarming. As a result of what was done the boy is now convalescing rapidly.

What would you have done — resect, extend drainage, or amputate?

4. The patient, Miss E. McG., is a hospital nurse twenty-four years of age. Her father and mother are alive and well. One brother died five years ago of pulmonary tuberculosis. One sister had an abdominal tumor, probably a fibroid, successfully removed by operation. One aunt died of cancer of the breast.

Up to the present illness she has always been an extremely healthy woman. She has never been sick before, even in childhood.

About six months ago she first noticed a small hard nodule in the outer portion of the right breast. This was painless and attracted little attention, but gradually increased in size. In the last six weeks the increase in size has been more rapid than previously.

About four weeks ago she noticed a small firm lump low down in the abdomen, which has since then grown considerably larger. It is slightly tender when she presses on it, but not otherwise painful. From the time that this mass was noticed she began to lose flesh and strength. Yesterday she became unable to work. Her appetite has been poor, but she has had no pain or distress in her stomach. There has been no nausea or vomiting. She has noticed a slight dry cough and shortness of breath for the past few days. She has had no chills, feverishness, or night sweats. Menses have been regular.

Examination shows her to be a tall pale woman, somewhat thin, with evident dyspnoea and weakness. Her temperature is 100.6° ; her pulse, 146; and her respiration, 30 per minute.

In the outer lower quadrant of the right breast there is a hard tumor the size of an egg, adherent to the skin, and projecting above the surface of the remainder of the breast. There are palpable glands in both axillae. The heart is normal in size and position: its action is rapid and somewhat weak, but there are no murmurs. In the back there is dulness over the bases of both lungs up to the angles of the scapulae, with much diminished breathing and numerous fine moist râles in the areas of dulness. The abdomen is large, prominent, especially in the lower portion, where there is felt a hard irregular tumor extending from the pubes midway to the umbilicus and to both sides of the median line almost to the iliac spines.

This tumor is not tender, and is only slightly movable. Over it the percussion note is dull, but elsewhere the whole abdomen is tympanitic, even in the flanks, and the liver and spleen are not enlarged. There is no oedema of the feet. The haemoglobin is 65%. White count is 12,800. Urine is negative.

Discuss as thoroughly as time permits the diagnosis and prognosis in this case. Whether you advise for or against operation, give your reasons.

OBSTETRICS. — Professor W. L. RICHARDSON.

1. Hyperemesis gravidarum: aetiology and treatment?
2. Differential diagnosis between threatened abortion, hydatidiform mole, and extra-uterine pregnancy?
3. Discuss the use of the vaginal douche; antepartum, postpartum, and in the puerperium.
4. A primipara, at the end of the seventh month, complains of more or less constant and severe pain over the right sacro-iliac articulation. She walks with difficulty. Local examination discloses nothing. Probable diagnosis, prognosis, and treatment?
5. State concisely the normal mechanism of labor in breech presentation.
6. The etiology, prevention, and treatment of puerperal cystitis?
7. Discuss chill in the puerperium, with especial reference to its day of occurrence.
8. In the case of a multipara, after seven hours' labor, the first vaginal examination reveals a presentation of both feet, S. L. A.; below the feet, just within the vulva, is a loop of the funis pulsating feebly. The os uteri is fully dilatable; the breech is above the brim of the pelvis; the pains are infrequent and of only moderate strength; the mother's condition is excellent. How would you proceed with the case?
9. Mrs. A. Thirty-three. Third pregnancy. Seen for the first time in consultation about a week before the calculated date of labor. First pregnancy was terminated by a difficult high forceps operation after a long labor, a living child being extracted. Second pregnancy, also terminated by a difficult high forceps operation, the child being dead. Both the children were said to be well above average size, but no definite weights were given.
Abdominal examination shows the presence of a large child. Head presentation, without sign of engagement. Position O. D. P. Pelvic measurements as follows: Inter-spinal, 25 cm.; inter-cristal, 28 cm.; external conjugate, 20 cm.; diagonal conjugate, 11½ cm. Discuss treatment.
10. Causes, symptoms, and treatment of internal concealed haemorrhage?

GYNAECOLOGY. — Professor GREEN.

1. Pruritus vulvae: aetiology and treatment.
2. Having replaced a retroverted uterus to its normal position and fitted a pessary, what directions would you give the patient? What subsequent care and observation should be given by the physician to such a case?

3. Laceration of the cervix uteri, with eversion, erosion, and cystic degeneration: describe the preliminary treatment you would give preparatory to trachelorrhaphy.

4. Give the general principles on which chronic endometritis should be treated, according to its type.

5. By what routes may infection in the genital tract reach the parametrium, and in what ways may nature arrest and limit the process? What may be the pathological results, if the infection is not arrested?

6. What is the usual regional classification of myomatous tumors of the uterus? And what are the chief symptoms of these new growths according to their location?

DERMATOLOGY.—Asst. Professor BOWEN.

1. Describe a typical case of tinea tonsurans and give directions for treatment.
2. General principles of treatment in eczema.
3. With what other affections may scabies be confounded, and what are its chief characteristics and its treatment?
4. Epithelioma of the skin: its characteristics and its course.
5. Treatment of acne vulgaris.

SYPHILIS.—Dr. POST.

1. What would lead you to think a lesion upon the tongue a primary lesion of syphilis?
2. What characteristics will allow you to differentiate between an early and a recurrent papular syphilide?
3. What is the condition of the lymphatic glands during the primary stage of syphilis [*i. e.* before the appearance of secondary manifestations] and what is their value in diagnosis?
4. What peculiarities would lead you to suspect congenital syphilis in a young person between 10 and 15 years of age?
5. What measures do you recommend for the control of syphilis?

NEUROLOGY.—Professor PUTNAM.

1. What conditions in the nervous system give rise to a spastic gait? Name some disease in which this sign is present.
2. Of what value is the reaction of degeneration?
3. A man, thirty-five years of age, gave a history of having suffered for four weeks from severe abdominal pain for relief of which he had applied to several physicians without success.
Various diagnoses had been made and operation for appendicitis had been advised.

During the fourth week his legs began to grow weak and he had difficulty in retaining his urine. When seen a week later he was found to have almost completely lost the power of motion in his legs and feet, while sensibility to touch and pricking was markedly diminished everywhere below the umbilicus. The knee-jerks were exaggerated on both sides, and ankle-clonus and Babinski's reflex were present on both sides. There was incontinence of urine. The pupils were normal.

The patient did not use alcohol and denied having had venereal disease. Diagnosis and treatment.

PSYCHIATRY.—Dr. COWLES.

1. Describe the action of the "stream of consciousness" and the attention with respect to its "inhibiting or exciting" influence.

2. What symptoms in the phases of depressive-maniacal insanity can be referred to changes in physiological irritability and organic sensations?

3. Describe the "Involution Psychoses" and their differential characteristics with reference to the "non-deteriorating psychoses."

4. CASE.—A woman; single. History negative as to neuropathic tendency; normal as a child, left school at 14, and since kept house for family; quiet in disposition with domestic tastes.

In April, 1899, aged 28 years, complained of "neuralgia" in face; began to sleep poorly, and to talk much about religion and the doings of the priests; more constant in attendance at church, and in June its frequency and unusual hours interfered with household duties. Throughout summer complained of headaches; said her head "whirled and people whirled" about her; insomnia continued. In September became slovenly in appearance and habits, objected to bathing, etc., lost interest in her duties; talked much about priests; became indolent, crying at times, and sister had to assume control of housekeeping. Being forbidden, by her father, to go to church and blaming him for the hardship to her, she imputed to the priests the responsibility for this and the trouble of her mind; she spoke of this as a curse the priests had put upon her. Any picture or story she might read she said had reference to her and came from the priests. She was not very restless at this time, but wandered about rather aimlessly, was quiet at night; later spoke of hearing voices that told her to go to church. Toward spring of 1900, though appetite and sleep improved and she cried less, she was still slack in appearance and habits. Her talk was almost wholly of the priests and the "voices" which she wanted stopped; sometimes remaining silent for half a day. After this she continued to speak of "terrible sights" and "terrible sounds"; and of being "under a ban"; said she would not work until the "power" or "curse" was removed. If engaged in a task was liable to stop suddenly saying that the "Divine Power" would not let her do more. Always well oriented; menstruation regular; weight had decreased, 150 (normal) to 130 pounds on admission to hospital.

In Hospital; admitted May, 1900. Physical examination practically negative. General behavior at times strikingly childish; twisted about, snapped her fingers, clapped her hands, threw her legs about regardless of appearance, pulled at her clothes, etc.; walked in an awkward clumsy manner; spoke with a high-pitched, peculiar, peevish expression,—at times smiling,—again suddenly beginning to cry,—and again singing or

whistling. Usually occupied herself with nothing, lounging about, disposed to lie in bed till late in the day, and to stay in her room associating little with other patients. Her talk to nurses was mostly of the priests, — the voices, — her desire to go home; on one occasion soiled the bed. At night sleeping 5 or 6 hours, wakeful and restless, walking about room and sometimes pounding on wall, asking nurse for a priest, etc. She recognized her behavior as unnatural, and said: "I can't help it," — "I feel foolish," — "I do it for fun." At times she would assert that she was well; again would say: "I wish I could get out of it."

Her ideas were rather vague and her attempts to explain them were feeble and scattering. In this disjointed way she spoke of being "under a ban," or a "curse"; "I'd be all right and act properly if it wasn't for these voices"; also of "Divine Power," — "power of demons." Once said, "The Electrical Company has got me"; again, "I don't know what it all means"; at another time said it was "The Fathers" who were talking, — "They talk everything — from above — rehearsing everything good and bad." Visual hallucinations were indicated by her saying, "I have seen beautiful sights; I have seen the Father beside me." She showed no consistent resistiveness nor muscular negativism; always well oriented, no marked memory defect. There was increase of nervous disturbance at the menstrual period, — only some increase of listlessness.

After two months in hospital she was discharged, "not improved."

Give diagnosis stating characteristic symptoms, and prognosis.

OPHTHALMOLOGY. — Asst. Professor STANDISH.

1. Iritis.
2. Trachoma.
3. Give the methods of examination which should be used in a case of convergent strabismus in a child six years of age, the reasons for them, and proper treatment for the conditions found.
4. What should be noted in the examination of the eyes of school children?
5. What are the characteristics of the field of vision in
 - (a) Toxic amblyopia from tobacco and alcohol?
 - (b) Retinitis pigmentosa?
 - (c) Hysteria?

OTOLOGY. — Professor BLAKE.

1. Describe the tympanic cavity.
2. What muscular movements favor the opening of the Eustachian tube?
3. Symptoms and treatment of hydrops ex vacuo.
4. Symptoms of labarynthine haemorrhage.
5. Pathology of acute suppurative middle ear disease.
6. Describe the simple mastoid operation.

LARYNGOLOGY.—Asst. Professor COOLIDGE.

1. Causes, seat, and treatment of nosebleed.
2. Abscess of the nasal septum: symptoms, differential diagnosis, treatment.
3. How would you treat haemorrhage of the tonsil, following tonsillectomy?
4. Retro-pharyngeal abscess: causes, symptoms, diagnosis, treatment.
5. Describe the Killian method of examination of the posterior wall of the larynx. What are its advantages?
6. What laryngeal appearances would lead you to consider a case one of malignant disease of the larynx rather than tuberculosis?



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